

PSYCHOLOGICAL ABSTRACTS

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PSYCHOLOGICAL ABSTRACTS

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GENERAL

1414. Aveling, F. **The status of psychology as an empirical science.** *Nature*, 1933, 132, 841-843; 881-882.—An empirical science is defined as either one which is supported by the evidence of the senses or one which is built up out of the elements of experience. Physical science is an example of the first kind, psychology an example of the second. The sciences of nature, concerning themselves with sensed-things, and other sciences, concerning themselves with thought-things, make selections of experiences and consider them as if they were independent of us. Psychology, concerned with the totality of experience and making no abstraction from the fact that it is experience, provides an account of the empirical origin of principles of systematization and explanatory concepts which are used in the other sciences. Observation, description, classification, and structural analysis of data are necessary first steps in psychology. Analysis yields more than mere sensations and elements; introspection has discovered relations which obtain between sensations, between concepts, and between percepts and concepts. Further steps are the discovery by functional analysis of the laws of occurrence of psychological events, and the derivation of explanatory concepts, which concepts may be physical, physiological, or psychological. Scientific explanatory concepts are derived from immediate experience.—*E. H. Kemp* (Clark).

1415. Basso, L. **La science, la technique et la société.** (Science, technology, and society.) *Rev. phil.*, 1933, 58, Nos. 5 & 6, 343-372.—A study of the investigations of the complex relations which exist between theory and application and of the respective positions of science and technology.—*M. H. Piéron* (Sorbonne).

1416. Becker, F. **Die Instinkt-Psychologie William McDougalls.** (The instinct psychology of William McDougall.) Reichenberg in Böhmen: Gebr. Stiepel, 1933. Pp. vi + 87. 3 RM.—The writer summarizes the principal theories of McDougall and criticizes them from his own point of view. He approves McDougall's ingenious attempt to construct a theoretical psychology. The book contains the following chapters: William McDougall's principal ideas (introduction); instinct as the fundamental psychic process; instinct and character; the laws of modification; McDougall's argument against the pain-pleasure theory; psychological and biological motivation; final considerations. In a special chapter the hunger-appetite theory of the writer is treated. The criticism—which is contained in the second part—is directed against the laws of modification and against McDougall's views about the relation between feeling and striving.—*F. Becker* (Munich).

1417. Bentley, M. **Man: dust or deity?** *Scient. Mo.*, 1933, 37, 365-368.—*J. F. Dashiell* (North Carolina).

1418. Berné, A. **Les travaux de Charles Henry et la physique future.** (The works of Charles Henry and the physics of the future.) *Bull. Inst. gen. psychol.*, 1933, 32, 41-87.—A presentation of the theory of psychic radiation, which depends upon masses smaller than atoms. Vibratory transmission is made through the ether, which is a universal element.—*M. H. Piéron* (Sorbonne).

1419. Beth, M. **Zur Psychologie des Ich.** (On the psychology of the ego.) *Arch. f. d. ges. Psychol.*, 1933, 88, 323-376.—After stating that German psychology has practically given up the attempt to get along without the concept of a striving, purposive ego, the author proceeds with a theoretical discussion of the nature, origin, and development of the thing which we call the "I." Personal observations as well as numerous references are cited in support of the principles presented.—*E. L. Kelly* (Connecticut State).

1420. Chén, T. Y. **[Behaviorism.]** Shanghai: Commercial Press, 1933. Pp. 190. \$1.80 mex.—This book treats especially the following topics, viz., (1) meaning of behaviorism, (2) the behavioristic interpretations of the old psychological terms, (3) the relation of behaviorism to other schools of psychology, neurology, social sciences and philosophy, and (4) criticisms against behaviorism and its answers.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1421. De la Vaissière, J. **L'imprécision des données initiales en psychologie expérimentale.** (Lack of precision of the initial facts in experimental psychology.) *Kwart. Psychol.*, 1933, 4, 24-32.—The initial facts in experimental psychology do not necessarily lack precision in spite of the limitations and confusion of the vocabulary employed (personality, consciousness, psychological dynamism, etc.). It is possible to determine fairly concretely among these initial facts a core material very adaptable to positive observation.—*T. M. Abel* (Sarah Lawrence).

1422. Destutt de Tracy, A. L. C. **Le mémoire de Berlin (1806).** (The memoir of Berlin, 1806.) *Rev. phil.*, 1932, 58, 161-187.—A discovery by P. Tisserand of a memoir that Destutt de Tracy wrote for the Academy of Berlin. Maine de Biran also took part in the competition, but neither received a prize. The subject was "To determine with precision the nature of analysis and of the analytic method in philosophy; to investigate the means of establishing the method's existence and of facilitating its use; and to detail these means, if there are any."—*M. H. Piéron* (Sorbonne).

1423. Drain, H. **Nietzsche et Gides.** (Nietzsche and Gides.) Paris: Madeleine, 1932. Pp. 256.—The

subject of the book is the duel of pride and humility.
—M. H. Piéron (Sorbonne).

1424. English, H. B. *A student's dictionary of psychological terms.* (4th ed.) New York: Harper, 1934. Pp. 131. Paper \$.90, cloth \$1.25.—The author has prepared a defining dictionary for about 2000 words chosen primarily from psychology and secondarily from closely related fields.—W. S. Hunter (Clark).

1425. Feigl, H. *The logical character of the principle of induction.* *Phil. Sci.*, 1933, 1, 20-29.—This is a philosophical analysis of the meaning of induction. The author shows that the widely recognized formulations of induction do not express the most fundamental rule of induction. The principle of induction expresses the increase of the probability of inductions in dependence upon the accumulation of factual evidence. The author rejects the theory of Keynes and others that probability is a logical relation and holds instead that the probability concept is essentially statistical in meaning. "The probability of a natural law is determined, roughly speaking, by the success-frequency of the inductive method by which it was discovered. The principle of induction, formulated in terms of the frequency theory, states simply that those regularities which have held so far without exception will be found to hold most frequently in the future." Thus inductive generalizations express our psychological and practical necessity of finding order in our universe so that we may adapt ourselves to it. Hence "the principle of induction must be interpreted as a pragmatic or operational maxim."—C. C. Peters (Pennsylvania State).

1426. Ferrari, G. C. *Autobiografia.* (Autobiography.) *Riv. di psicol.*, 1933, 29, 2-11; 69-85.—T. M. Abel (Sarah Lawrence).

1427. Fisher, R. A. *Indeterminism and natural selection.* *Phil. Sci.*, 1933, 1, 99-177.—The author finds in the new physics, dealing with single electrons and quanta of energy, an indeterminism in the behavior of the entities about which there cannot be the unswerving confidence that characterized the determinism of the older science dealing with larger units. Thus theoretically reliability and predictability of a system have the same basis now in the "natural" as in the "social" sciences; they rest in both cases on what are essentially laws of probability. But this makes a theoretical rather than a practical difference from the old days of security, because in the physical world the probabilities depend upon the average behavior of such very large aggregates of independent elements as to involve an extremely high degree of uniformity. This conception of natural law as always a statement of probabilities "has the scientific advantage of being a more general theory of natural causation, of which complete determinism is a special case, possibly still correct for special types of prediction." The author finds this theory of indeterminism in intermediate events more consistent with observable facts than that of mutations in biological evolution. There is thus a creative factor in evolution, lying not so much in the casual

component of any one particular event as in the aggregate of such casual components.—C. C. Peters (Pennsylvania State).

1428. Gault, R. H., & Howard, D. T. *An outline of general psychology.* New York: Longmans, 1933. Pp. vi + 452. \$2.80.—This is a revised edition of a textbook for college students which was first published in 1925. The first three chapters consist of an introductory and orientation chapter and two on phylogenetic and ontogenetic development of the nervous system. The main body of the book is concerned with such topics as sensation, attention, perception, motor reactions, remembering, imagining, conceptual thinking, voluntary conduct, and feeling and emotion. The last two chapters are a sketch of the history of psychology, including a brief section on contemporary schools of psychology, and a resumé of findings in applied psychology in the fields of mental testing, personality studies, psychoanalysis, advertising, and education. There is a section devoted to exercises and reading references.—D. S. Oberlin (Newark, Del.)

1429. Gesell, R. *An electrically driven contact breaker capable of delivering galvanic shocks ranging from 0.000,01 to 1.0 second duration.* *Science*, 1933, 78, 386-387.—Description of a particularly rugged, dependable, and easily manipulated electrically driven contact breaker. Calibration for the shorter interval settings of the instrument indicates an accuracy of about 0.000,025 seconds. Four figures are included.—P. Seckler (Radcliffe).

1430. Goldberg, N. [Behaviorism.] *Unser Shul*, 1933, 3, No. 8, 8-14.—First half of a semi-popular account of behaviorism and its relation to other psychological systems.—D. Shakow (Worcester State Hospital).

1431. Gray, J. *The mechanical view of life.* *Nature*, 1933, 132, 661-664.—According to the author, the spontaneous origin of living matter "is possible, but it is so improbable that, if considered as an observable phenomenon, in any other sphere of human thought, it would be discarded as a figment of a deranged brain." He says further: "If we decline to accept the spontaneous origin of living from non-living matter, there is no particular reason why we should hope to express all the properties of an organism in terms of physical laws; . . . it seems more logical to accept the existence of matter in two states (the animate and the inanimate) as an initial assumption."—E. H. Kemp (Clark).

1432. Haldane, J. B. S. *Quantum mechanics as a basis for philosophy.* *Phil. Sci.*, 1933, 1, 78-98.—This is an effort to solve the old problem of psychophysical parallelism in terms suggested by the new physics. The author's theory is set forth quite tentatively. The basic principle is the wave mechanics of the electron. The De Broglie waves of an electron extend out indefinitely. They also constitute unified wholes, the unity being fundamentally a relational one. This gives comfort to the realists rather than to the nominalists of medieval philosophy. The author believes that mind may also be a part of the

wave-like aspect of things—a resonance phenomenon. In this way it is like the rest of nature and may interact with nature so as to make certain events more likely to occur. "In some sense the mind may extend out to its physical objects." "If we regard the wave-like aspect of matter as more fundamental than the particle aspect, we can surmise that it is of the same general character as human experience, but less, or at any rate differently, organized."—C. C. Peters (Pennsylvania State).

1433. Kuroda, R. *Kan no kenkyu*. (Studies on Kan.) Tokyo: Iwanami Shoten, 1933. Pp. 309.—A systematic representation of author's stereopsychology. Kan, according to him, is a popular expression of comprehension which is an essential constituent part of experience and acts together with or apart from consciousness. Comprehension is in its character akin to intuition but can never be identified with it; it is something other than the so-called unconscious, anticipating schema of Lindworsky or any other related terminologies found in Western psychology. It is, as it were, a state of experience characterizing an Orientalistic way of thinking. The book comprises the following contents: I. Introduction. II. Literal meaning of Kan. III. Kan which appears in connection with cognition and judgment. IV. Lindworsky's anticipating schema. V. Intuition. VI. The subconscious. VII and VIII. Kan found in the processes of action and will. IX. The secret of military arts. X. Description of "Yakusha Rongo" (code of players). XI. Art of Séami, a genius of No play. XII. Interpretation of Tchuang-Tse. XIII. The method of the Dyana. XIV. Definition of psychology and concept of comprehension. XV. Concrete meaning of comprehension. XVI. Quality of comprehension. XVII. Conditions underlying the establishment of comprehension. XVIII. On the physiological foundation of comprehension. Index.—R. Kuroda (Keijo).

1434. Louttit, C. M., & Waskom, W. B. *Indiana psychodiagnostic blank*. Bloomington, Indiana: Indiana University, 1933. Pp. 12.—A mimeographed diagnostic blank covering psychological, physical, and social service items, used by the Indiana University Psychological Clinics.—D. Shakow (Worcester State Hospital).

1435. Louttit, C. M., & Waskom, W. B. *Manual for the Indiana psychodiagnostic blank*. Bloomington, Indiana: Indiana University, 1933. Pp. 13. \$.50.—Mimeographed manual giving instructions for filling out the Indiana psychodiagnostic blank.—D. Shakow (Worcester State Hospital).

1436. Lovejoy, A. O. *Dualism and the paradox of reference*. *J. Phil.*, 1933, 30, 589-606.—The article aims to answer the question "What is actually present to consciousness when the experience of 'referring to' an object as 'real' or 'not-given' occurs?" Or, how can an event of my present experience refer to an event in my own past or future, or in the experience of others, or to an extra-experiential event? The answer is that "a part of the present experience of mine consists of a non-sensory element, namely, of what I have called a conceptual schema of relations

of mutual existential externality. In different positions in this schema the various elements of my present content are experienced as situated." In memory the consciousness of the event as lying in the past is its essential feature; images are now present, but the things of which they are images are located as past. The schema itself is a "pure emergent" that does not admit of explanation. In perception the transcendent reference makes a clear duality between the data presented and the reality to be known. Perception does not seize reality, but on the contrary maintains the duality. Hence the dualist must not ask, or attempt to explain, how the seizure is effected. This answers the challenge in Strong's article *The Missing Link in Epistemology*.—E. T. Mitchell (Beloit).

1437. Nogué, J. *Site et champ*. (Site and field.) *Rev. phil.*, 1933, 58, Nos. 9 & 10, 188-238.—The author, opposing (like Kant) form and matter, appeals to an activity of the self in the construction of space. He reverses the direction of the theory. Space which lacks quality and which is destined for our motor activity is subjective, since it centers on the body. It is in the incorporation of qualities that spatial relations are detached from the self. By the side of locomotor activity, which has mapped sites, one must make a place for plastic activity, which creates in certain fields of sensibility a world of independent figures of the particular site where the figures appeared which make possible the liberation of the system of sites from the bonds which bind it to the self. The distinction between the two forms of activity (locomotor and plastic) determines the generalization of the concept of space.—M. H. Piéron (Sorbonne).

1438. Patrick, G. T. W. *The new burden on behavior*. *Scient. Mo.*, 1933, 37, 344-352.—J. F. Dashiell (North Carolina).

1439. Pfänder, A. *Die Seele des Menschen*. (The soul of man.) Halle a. S.: Niemeyer, 1933. Pp. viii+416. 9 RM.—The task of the first part of this book is the understanding of the human psychic life. The writer distinguishes between two groups of fundamental drives which are purely psychic in nature. "Transitive drives" are directed towards things, which are outside of the soul. "Reflexive drives" are directed towards soul. In each of these groups are five drives. All these drives take their origin from a single primary drive. In the second part of the book the primary or original drive of man is discussed from a psychological and metaphysical-theological point of view.—A. Pfänder (Munich).

1440. Sarma, R. N. *Indian psychology. Sanskrit sources surveyed*. *The Hindu*, n. d.—An attempt to subject the principles of the psychology of Yoga to strict scientific scrutiny. Various misconceptions on the part of American and European critics of Yoga are pointed out.—H. W. Karn (Clark).

1441. Struck, D. J. *On the foundations of the theory of probabilities*. *Phil. Sci.*, 1933, 1, 50-70.—The discussion centers on two difficulties in the theory of probability: (1) the definition of equally likely events, and (2) the relation between the laws of causal

natural science and the laws of statistical regularity. "Equally likely" must be determined by the presence of dynamics governing the system; there is no probability without causality. The operation of a system or systems of dynamics produces a mixture of cases which gives rise to statistical regularity. Although these dynamics are often insufficiently known to enable us to understand the individual cases, each case has in fact its adequate cause; when we use the term "accidental" we merely mean that the outcome is not causally connected with a series of events that we consider more general or more important. Thus statistical and causal considerations of phenomena are two different aspects of nature, each with its own field of application; the latter deals with the dynamics of the system and the former with the regularities of behavior among its cases.—C. C. Peters (Pennsylvania State).

1442. Toulouse, —. *L'objet de la biotypologie. Le type et les applications pratiques.* (The aim of biotypology. The type and practical applications.) *Biotypol.*, 1933, 1, 55-63.—Biotypology is a science of coordination. It seeks to gather the largest number of elements from the largest number of individuals forming homogeneous groups on the basis of sex, age, race, culture, and profession. Its tests must be the most objective possible, free so far as possible from the traditional procedures of psychological research and interrogating the facts with a minimum of formal hypotheses.—M. H. Piéron (Sorbonne).

1443. Watson, G. *Psychology under Hitler. School & Soc.*, 1933, 38, 732-736.—The author gives a survey of the papers read at the Thirteenth Congress of the German Psychological Association as well as a general characterization of the spirit of the meeting. The Jews and Viennese, of course, were conspicuous by their absence. Atomistic or element psychology, French positivism, and psychoanalysis were under vigorous attack by some. Papers on Gestalt and Gestalts—and these not limited to the perceptual field—were many. The psychology of race, politics, propaganda, character, and personality type received much attention. It is the author's opinion that more than half of the German psychologists "feel the crisis is over and that a genuine psychology, more closely related to the whole living person than ever before, will develop in Germany on a new and advanced level."—H. L. Koch (Chicago).

[See also abstracts 1484, 1656.]

SENSATION AND PERCEPTION

1444. [Anon.] *Proposed standards for noise measurement.* (Report of Committee on Acoustical Measurements and Terminology.) *J. Acous. Soc.*, 1933, 5, 109-111.—A list of nine tentative standards to be used in noise and sound measurements is presented.—P. E. Huston (Worcester State Hospital).

1445. Bahn, C. A. *The eyes of some famous historical characters. I. Little journeys in ophthalmology.* *Amer. J. Ophth.*, 1933, 16, 425-429.—The author reports the names of historical characters who

suffered from blindness in one or both eyes, color blindness, and excessive myopia. Bibliography of 43 titles.—T. Karwowski (Dartmouth).

1446. Baron, P. *La mesure des bruits.* (The measurement of noise.) *Rev. d'acoust.*, 1933, 1, 280-296.—The author presents the contemporary status of physiological knowledge concerning noise and indicates the factors which must be considered in measuring noise as well as the precision which may be attained.—M. H. Piéron (Sorbonne).

1447. Berens, C., Connolly, P. T., & Kern, D. *Certain motor anomalies of the eye in relation to prescribing lenses.* *Amer. J. Ophth.*, 1933, 16, 199-213.—The authors point out some reasons why glasses that correct errors of refraction do not always provide visual comfort for the wearer.—T. Karwowski (Dartmouth).

1448. Beyne, J. *Les conditions d'éclairage correspondant à la mesure correcte de l'acuité visuelle chez l'homme.* (The conditions of illumination corresponding to the correct measure of visual acuity in man.) *C. r. Soc. biol.*, 1933, 113, 754-756.—The author proposes as a physiological definition of visual acuity in the normal man that visual acuity which permits the subject to distinguish one from the other two black elements on a white background separated by an angle of one minute when, the brightness of the black being practically zero, the brightness of the background, illuminated by white light, has a brightness of one thousandth of a candle per square centimeter.—M. H. Piéron (Sorbonne).

1449. Bonain, A. *L'oreille et ses maladies; l'audition et ses troubles. Les organes de l'équilibre.* (The ear and its diseases; hearing and its disorders. The organs of equilibrium.) Paris: G. Doin, 1933. Pp. 294.—A complete presentation of data bearing on the organs of hearing and equilibrium and on their disorders.—M. H. Piéron (Sorbonne).

1450. Bourguignon, G. *Interprétation des sensibilités thermique et douloureuse, à l'aide des chronaxies sensitives cutanées normales et de leurs variations dans la syringomyélie.* (Interpretation of thermal and pain sensitivity by means of sensitive normal cutaneous chronaxies and their variations in syringomyelia.) *C. r. Acad. sci.*, 1933, 197, 792-794.—The author says that of the three sensory modalities attributed to the skin two only (thermal and cutaneous sensitivity) are necessary for knowledge of external objects. Pain sensitivity is exceptional, as is also tickle, which is its threshold. Temperature sensitivity appears as a differential sensation resulting from the simultaneous activity of Meissner corpuscles and free nerve endings in the epithelium. These two elements are like two thermo-electric needles which give the temperature difference between the object which touches the skin and the blood which irrigates the region touched. The isolated excitation of the Meissner corpuscles and their fibers gives only a sensation of tickle or pain. A similar excitation of the free nerve endings of the epithelium gives only a sensation of heat, although the two elements functioning together give the sensation of temperature.

These hypotheses are derived from experiments made on cases of dissociation of sensibility in patients affected with syringomyelia.—*M. H. Piéron* (Sorbonne).

1451. Brunswik, E. Untersuchungen über Wahrnehmungsgegenstände: I. Die Zugänglichkeit von Gegenständen für die Wahrnehmung und deren quantitative Bestimmung. II. Holaday, B. E. Die Grössenkonstanz der Sehdinge bei Variation der inneren und äusseren Wahrnehmungsbedingungen. III. Eissler, K. Die Gestaltkonstanz der Sehdinge bei Variation der Objekte und ihrer Einwirkungsweise auf den Wahrnehmenden. IV. Klimpfner, S. Ueber den Einfluss von intentionaler Einstellung und Übung auf die Gestaltkonstanz. V. Klimpfner, S. Die Entwicklung der Gestaltkonstanz vom Kind zum Erwachsenen. (Studies on objects of perception: I. The accessibility of objects for perception and their quantitative determination. II. Size constancy of things seen by variation of the inner and outer conditions of perception. III. Gestalt constancy of things seen by variation of the object and its manner of influencing the perceiver. IV. Concerning the influence of intentional attitude and practice on Gestalt constancy. V. Development of Gestalt constancy from childhood to maturity.) *Arch. f. d. ges. Psychol.*, 1933, 88, 377-628.—In the first of this series, the author lays down the theoretical framework for an objective psychology of perception in which it is proposed to study perception from the standpoint of the perceived object rather than from the experiences of the perceiver. A general technique for studying the relationship between actual and perceived objects is proposed and a formula is given for calculating the resulting constancy of the relationship. Part II deals with an investigation of the relationship between the object and perceived object with respect to size constancy. The paired comparison technique was used with 11 subjects. The general conclusion is that none of the conditions of depth perception are absolutely necessary, but that every one is to a large extent replaceable by others. Part III is the report of an investigation of Gestalt constancy. Geometrical forms were presented in four planes other than at right angles to the subject's line of vision and judgments then obtained as to the apparent shape of the object as compared with the standard form. The results were interpreted with the aid of the Brunswik formula. Binocular vision results in greater constancy than monocular vision. Part IV is a study of the effect of attitude and practice on Gestalt constancy. Five subjects were used on 13 different days, the technique being the same as that used in Part III. The attitude assumed by the subject resulted in relatively large changes in the Gestalt constancy. Practice increased the changes thus brought about. Part V is the report of a genetic study of Gestalt constancy. Eighteen age groups each represented by 16-20 subjects of both sexes were tested by the technique described above. The resulting age curve shows a fairly regular increase in Gestalt constancy from ages 3 to 14, which falls off rapidly and reaches the 9th year level for the 18-year-olds and adults

19 to 30, and finally drops to the 8th year level for adults 30-70 years of age. The curve is almost an exact duplicate of those previously reported for size constancy and color constancy. Small sex differences were found at each age level.—*E. L. Kelly* (Connecticut State).

1452. Charlin, C. Simulation and ocular hysteria. *Amer. J. Ophth.*, 1933, 16, 683-686.—The author attempts to distinguish the simulator from the hysteric in terms of their mental states; the former tries to mislead, is uncooperative, contradictory, and apprehensive under examination, the latter is desirous of regaining his mental health, and so is pleased to be examined and cooperates fully. The author describes three types of hysterics: the grand ocular hysteric, the type without external characterization, and the intermediate type, the hysterical simulator.—*T. Karwoski* (Dartmouth).

1453. Clark, C. Entoptic phenomena observed in my eyes before and after cataract operation. *Amer. J. Ophth.*, 1933, 16, 706-711.—This article is an abstract of a thesis submitted at the University of Texas in partial fulfillment of the requirements for the degree of Master of Arts. The observations were made by a trained subject. Entoptic phenomena after cataract operation are described and illustrated. Some experiments and observations concerning color vision are presented, such as the description of the way spectral colors appear after cataract operation, the results of a repetition of D. Frank Allen's experiments with the flicker spectrometer, and observations concerning after-images, astigmatism and accommodation.—*T. Karwoski* (Dartmouth).

1454. Conrad, E. B., & Posner, A. The circulation of the inter-ocular fluid. I. The importance of the optic nerve. *Amer. J. Ophth.*, 1933, 16, 19-28.—This paper deals with the part played by the optic nerve in the drainage of the inter-ocular fluids. The author injected a stain, developed by Weed and Wegsforth, into the vitreous of both human and animal eyes. Five human eyes were used, of which only one was normal. The results showed that part of the material injected was found in the central vessels of the optic nerve in the eye of the rabbit and in the normal human eye, and that no stain was found in the central vessels of the four pathological human eyes, or in the eyes of dogs and guinea pigs. Bibliography of 28 titles.—*T. Karwoski* (Dartmouth).

1455. Cordes, F. C., & Horner, W. D. Hysterical amblyopia. *Amer. J. Ophth.*, 1933, 16, 592-597.—Three cases of hysterical blindness are reported. Each was cured by suggestion. A nurse was cured by being assured that in such functional disorders as hers visual impulses are short-circuited before they reach the visual centers; under anesthesia, however, all visual impulses cease but when consciousness is regained they again flow along the nerve pathways and pass the spot where previously they had been deflected. Thus upon awakening she would see perfectly again. It was suggested to the other two patients that in their cases vision was impaired due to the pressure of the cerebral spinal fluid. Lumbar

punctures were performed and cures followed. From the therapy used in these cases the authors conclude that no definite treatment can be outlined.—T. Karwoski (Dartmouth).

1456. Costa, A. Una illusione tattilo-muscolare-cinetica che può suggerire ai ciechi la prospettiva dei veggenti. (A tactile-muscular-kinetic illusion which may suggest to the blind the perspective of seeing individuals.) *Arch. ital. di psicol.*, 1933, 11, 77-88.—A report of experiments on blind subjects and on seeing subjects with eyes shut, which led to an illusory estimation of the sizes of objects held between the hands, according to their position and the position of the arms with respect to the body, so as to suggest to the blind, with the diminishing of the object at a distance, the phenomenon of visual perspective.—R. E. Schwarz (V. A. Facility, Northport, N. Y.)

1457. Cox, G. H. Deafness in Nassau County school children. *Med. J. & Rec.*, 1933, 138, 452-454.—A survey with the 4A audiometer of 749 children from the fourth to the ninth grades in four schools of Nassau County, N. Y., showed deficient hearing in 5.07%. Tubal catarrh and chronic catarrhal otitis media associated with adenoids and hypertrophied tonsils accounted for the largest group. This test should be carried out as a routine in the public schools at least once a year.—M. E. Morse (Catonsville, Md.)

1458. Diringshofen, H. v. Ueber den Einfluss niederer Temperaturen auf die Wahrnehmung von Gliederstellungen und Kraftentfaltungen. (The influence of low temperatures on the perceptions of limb positions and force developments.) *Zsch. Biol.*, 1932, 92, 523-534.—(*Biol. Abst.* VII: 21059).

1459. Dufour, M. Sur la théorie des verres correcteurs donnant des images ponctuelles. (Concerning the theory of corrective glasses giving punctual images.) *Ann. d'ocul.*, 1933, 170, 237-243.—M. H. Piéron (Sorbonne).

1460. Escher-Desrivieres, —, Faillie, R., Jonnard, —, & Vial, —. Réactions psycho-motrices visuelles en relation avec l'éblouissement par projecteur d'automobiles. (Visual psycho-motor reactions in relation to the glare of automobile lights.) *C. r. Acad. sci.*, 1933, 197, 699-701.—The visual psycho-motor reaction time is constant for a given illumination. The authors investigated the change in phenomena when an orange glass is introduced between the eye and the illumination test object and when the subject is affected by a glaring headlight, the yellow glass being present or absent. The following results were secured: (1) aside from glare, the increase in reaction times due to the yellow glass ranged from .01 to .002 seconds; (2) in white light the headlight increased the reaction time by about 20%; (3) yellow glass is an effective protection against glare.—M. H. Piéron (Sorbonne).

1461. Ferree, C. E., & Rand, G. The eye as a factor in the difference between daylight and twilight. *Amer. J. Ophth.*, 1933, 16, 494-495.—The authors are concerned with the causes of the bluish color of the

illumination of low intensity. The bluish color of twilight illumination is in part explained by a physical factor due to the nature of the reflection of sunlight from the upper layers of the earth's atmosphere. Apart from this physical cause, however, there is a physiological cause, which is demonstrated by the fact that the same proportion of wave-lengths that give white light at high intensities give light of a bluish tinge at lower intensities. Apparently the eye does not combine the wave-lengths of the spectrum to produce white in the same proportions at all intensities.—T. Karwoski (Dartmouth).

1462. Ferree, C. E., Rand, G., & Monroe, M. M. Critical values for the limits of the color fields in the eight principal meridional quadrants taken separately. *Amer. J. Ophth.*, 1933, 16, 577-591.—The limits for red, blue and green were determined for 150 eyes. This group was subdivided into classes of eye condition, emmetropic, hyperopic, myopic and presbyopic. The data are treated statistically, giving the limiting values in degrees, the range of limiting values, the average limit, the median limit, and the median deviation for the four classes of eye condition studied. These data are also represented graphically. In general emmetropic and hyperopic subjects have the widest limits in the eight quadrants considered; the myopic the next widest and the presbyopic the narrowest. The scatter or range of variation of results is in general greater than with form stimuli (previously reported); the scatter is least for blue and greatest for green, and in general greatest for myopic eyes, next greatest in presbyopic and least in hyperopic eyes. One degree blue, red, and green of the Heidelberg series of colored papers were used.—T. Karwoski (Dartmouth).

1463. Fletcher, H., & Munson, W. A. Loudness, its definition, measurement and calculation. *J. Acous. Soc. Amer.*, 1933, 5, 82-108.—Loudness of sounds is defined as the magnitude of auditory sensations. Mathematical formulae are developed, and tables and graphs are presented to be used in calculating the loudness of continuous complex sounds. A discussion of the standard conditions in which the formulae hold, the types of apparatus used, the position of the observers, the frequencies and intensities of the sounds, etc., is included.—P. E. Huston (Worcester State Hospital).

1464. Franz, S. I., & Layman, J. D. Studies in cerebral function. I. Peripheral retinal learning and practice transfer. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 65-78.—In view of the fact of the connection of each eye with both cerebral hemispheres, the authors thought that "if a well-defined retinal area in one eye is stimulated by a complex visual presentation which normally cannot be discriminated or identified, and if, because of later training, discrimination takes place with that eye, we might find that the same stimulus could then be apprehended through the untrained eye." Results of their experimentation showed that apprehension by the untrained left eye equalled or approached that by the trained right eye. The "transfer" is not con-

sidered a real transfer, but is thought to be due to the fact that the trained cerebral areas are also utilized for the untrained eye, when the corresponding points are stimulated.—E. H. Kemp (Clark).

1465. Franz, S. I., & Kilduff, S. Studies in cerebral function. II. Cerebral dominance as shown by segmental visual learning. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 79-90.—The present investigation was planned to determine the use of the two cerebral hemispheres in the process of learning to discriminate visual stimuli. The results show what appears to be a left-sided eye-brain dominance for the learning of simple forms. No relationship between handedness and laterality of cerebral dominance was found.—E. H. Kemp (Clark).

1466. Franz, S. I., & Morgan, R. C. Studies in cerebral function. III. Transfer of effects of learning from one retinal area to other retinal areas. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 91-98.—The authors conclude that the training of one retinal-cerebral area has an effect which is not strictly limited to the area that has been under training. The extension was noticeable over a retinal area equivalent to as much as 20°. The amount differed for those forms which were respectively 10° and 20° distant from the areas which had been trained, with a slightly better ability to take in those forms which were nearer. Localized sensory training apparently involves portions of the cerebrum other than the projection areas.—E. H. Kemp (Clark).

1467. Franz, S. I., & Davis, E. F. Studies in cerebral function. IV. Simultaneous reading with both cerebral hemispheres. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 99-106.—In an earlier experiment of this series it was found that a subject could take in two visual stimuli affecting respectively the two halves of the retinae and the corresponding retinal hemispheres. The question arose whether the bilaterally placed stimuli are sensed together and mentally combined. Letters of the alphabet were used. Four-letter words were presented in such fashion that the first two letters acted upon the right side of the cerebrum and the last two letters acted upon the left side. The results were "sufficiently characteristic to show that separate stimuli affecting the two halves of the cerebrum simultaneously are united to make one whole."—E. H. Kemp (Clark).

1468. Franz, S. I., & Eaton, A. G. Studies in cerebral function. VI. Touchlocalization—constant errors. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 111-116.—A large number of experiments were carried out in which the subject was required to localize points on the skin which had just been touched with a camel's hair brush. Average errors and constant errors for each of four portions of the body were determined. On the right forearm the four subjects showed a constant tendency to localize toward the ulnar border and a generally constant tendency to localize toward the elbow. On the left the direction was also toward the ulnar border, but while two sub-

jects located toward the elbow the other two located toward the wrist. On the right thigh results were remarkably different; each subject showed a constant error in a different quadrant. On the left thigh three subjects located toward the knee and one toward the pelvis. It is obvious, therefore, that the constant errors in cutaneous localization are not consistent for these four subjects.—E. H. Kemp (Clark).

1469. Franz, S. I., & Eaton, A. G. Studies in cerebral function. VII. The possibility of training in tactile space perception. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 117-120.—Following the previous experiment in this series, which concerned the constant errors in touch localization, tests were continued to attempt to discover whether there would be an improvement in this function. In this series of experiments improvement was found to follow practice.—E. H. Kemp (Clark).

1470. Franz, S. I. Studies in cerebral function. VIII. Training in touch perception and cross-education. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 121-128.—In the previous study of this series in which it was found that subjects could learn to localize cutaneous stimuli more accurately, there was some evidence, but also some doubt, that the learning effect was transferred to the corresponding but contralateral portion of the body. The stimuli to be perceived were forms carved from linoleum attached to wood and brass and reasonably constant pressure of stimulation was maintained. Results showed contralateral transfer. It was concluded that the special training affected both corresponding cerebral regions or resulted in a general cerebral effect. Some neurological speculation is presented.—E. H. Kemp (Clark).

1471. Franz, S. I. Studies in cerebral function. IX. Diffusion effects following localized tactile training. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 129-136.—The results of this experiment show that training of a small area of the skin may have an effect over a larger area of the cerebrum than that relatively small part of the post-central cortex which is supposed to be connected with the special training area.—E. H. Kemp (Clark).

1472. Frischeisen-Köhler, I. Ueber die Empfindlichkeit für Schnelligkeitsunterschiede. (On sensitivity to speed differences.) *Psychol. Forsch.*, 1933, 18, 286-290.—The personal speed was investigated by presenting to subjects various speeds from a Maelzel metronome. Subjects reported which speed was most agreeable, or whether it was too fast or too slow. At the end two presentations were given close together, and subjects had to report which was the faster. 216 boys and 215 girls (ages 8-16) were used. Two groups were found: those that judged correctly and those that made mistakes (a single mistake threw them into the latter group). Among the boys 39.8% gave correct judgments, and 36.3% among the girls. The age levels 4-12 years showed an increase in accuracy. The number in the years 6-8 was much less than in the corresponding years of a higher school level. It was also found that the total number of

correct judgments was 83.8% for boys and 81.7% for girls, showing that there is not an inability to determine speed differences, but only a lack of sensitivity for very fine differences.—*J. F. Brown* (Kansas).

1473. Frischeisen-Köhler, I. Feststellung des weder langsamen noch schnellen (mittelmässigen) Tempos. (Determination of the neither slow nor fast [medium] speed.) *Psychol. Forsch.*, 1933, 18, 291-298.—The question was investigated whether all individuals designate approximately the same speed as neutral—neither too fast nor too slow. A metronome was used and subjects judged the speed. A speed of 72-108 strokes per min. was judged medium by 67.93% of the males and a speed of 76-108 strokes was judged medium by 59.67% of the females. This shows that there is a neutral range for a large number of individuals, although the entire range of the metronome was judged medium by others. This followed closely the binomial distribution. The curve of the females lies towards the faster side, just as the personal speed of males is somewhat slower than that of females. It was found that after a series of slow speeds had been given the subject would occasionally judge this speed as medium. By studying twins it was concluded that the personal speed of individuals is largely hereditary.—*J. F. Brown* (Kansas).

1474. Fry, G. A., & Bartley, S. H. The brilliance of an object seen binocularly. *Amer. J. Ophth.*, 1933, 16, 687-693.—In this article some quantitative data are presented to support the conclusion that binocular vision gives an increase in brilliance over monocular vision. The writers maintain that this fact can be accounted for on the hypothesis that the pathways from each of the corresponding points on the retina converge upon a common pathway in the brain and that physiological summation takes place. They discuss Graham's observation that the absolute threshold is no lower for two eyes than for one, and show how this fact can be explained in terms of a summation of brightness theory. The so-called Fechner's paradox which is said to be contradictory to the summation theory was investigated experimentally, and it was found to be due to border contrast. Hence Fechner's paradox does not contradict the summation theory, but rather is a demonstration of the role of border contrast in the cortical integration of the streams of impulses from each eye.—*T. Karwowski* (Dartmouth).

1475. Galkin, W. S. Die Schwankungen der Erregbarkeit der Nervenzelle und der epileptische Anfall. (The variations in sensitivity of nerve cells and the epileptic attack.) *Zsch. ges. exp. Med.*, 1932, 81, 374-389.—(*Biol. Abst.* VII: 21060).

1476. Gatti, A. Ricerche sperimentali sopra la soglia di rettilineità. (Experimental investigations on the threshold of rectilinearity.) *Arch. ital. di psicol.*, 1933, 11, 89-112.—To supplement his previous investigations and to prove that the Poggendorff illusion is due to laws inherent in the perception of complexes according to the principle of simplicity, the author performed numerous experiments to

establish the law of variability of the threshold of rectilinearity (straightness). Calculation corroborates introspective analysis and leads to the conclusion that the threshold of rectilinearity, or angular error made in putting three black dots in a straight line, is independent of the distance of the points and varies very slightly with inclination, showing very small values in correspondence to vertical and horizontal position. The individual variations are appreciable. Since the error in Poggendorff's illusion shows the same behavior, the author admits that this illusion is conditioned by the threshold of rectilinearity and is due to the psychological characteristics of the complex in which it is perceived, according to the principle of simplicity.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.).

1477. Gatti, A. Il principio di semplicità e il cosiddetto sovrapprezzamento degli angoli acuti. (The principle of simplicity and the so-called overestimation of acute angles.) *Arch. ital. di psicol.*, 1933, 11, 113-122.—On the basis of numerous experiments on the perceptual process, the author maintains that the perception of visual complexes is governed by the principle of simplicity, a term substituted by him for his earlier terms "maximum economy" and "minimum means" in order to avoid any teleological interpretation. He maintains that it is necessary to establish by analysis the criteria of psychological simplicity, which has an exclusively empirical value. He gives a series of optical illusions, from which he proves two criteria of psychological simplicity: the simplicity of the straight line and the value of the points of reference present in the complex. Finally, the author proves that the so-called motive for overestimating acute angles may be doubted and even denied.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.).

1478. Hecht, S., Schlaer, S., & Verrijs, C. D. Intermittent stimulation by light. II. The measurement of critical fusion frequency for the human eye. *J. Gen. Physiol.*, 1933, 17, 237-249.—An apparatus and procedure are described for the measurement of fusion frequency of flicker in the human eye.—*C. H. Graham* (Clark).

1479. Hecht, S., & Verrijs, C. D. Intermittent stimulation by light. III. The relation between intensity and critical fusion frequency for different retinal locations. *J. Gen. Physiol.*, 1933, 17, 251-268.—The critical fusion-log *I* relation for the rod-free area is sigmoid with a slope at the point of inflection of about 11.0. In the periphery the relationship shows two clearly separated sections: sigmoid relations at high and low intensities. These distinct functions are considered to be representative of rod and cone activity, the lower being due to the rods, the higher to the cones. At visual angles greater than 5° in the periphery the duality of the function is more strikingly apparent.—*C. H. Graham* (Clark).

1480. Hecht, S., & Verrijs, C. D. Intermittent stimulation by light. IV. A theoretical interpretation of the quantitative data of flicker. *J. Gen. Physiol.*, 1933, 17, 269-282.—A theoretical interpretation of

intermittent stimulation by light is given in terms of Hecht's reversible photochemical system. When tested, the interpretation seems to provide a reasonable description of the critical fusion-log *I* relationship and Talbot's law.—C. H. Graham (Clark).

1481. Hoche, A. E. *Nachbilder im bewegten Auge.* (After-images in the moving eye.) *Zsch. f. Sinnesphysiol.*, 1932, 62, 255-260.—The experiment described by the author, unlike most after-image experiments, deals with images experienced with the eye in motion. To secure the results described maximal light intensity, the light of the sun, is necessary. The author works 2 or 3 hours after sunrise or before sunset, thus avoiding the well-known dangers of looking at the sun with the naked eye. When an attempt is made to look at the sun the eye involuntarily turns away. The resulting after-image is not a band, as might be expected, but a number of disks connected by a band the width of which is less than the diameter of the disks. When the after-image disappears the bands between the disks disappear first and then the disks. The explanation of these facts is known only in part. Eye movement, as many experiments show, consists not of uniform motion but of a series of movements broken by pauses. The time of exposure of a given retinal area will be greater during the pause, thus giving more intense stimulation and a more durable after-image. The author gives evidence for rejecting irradiation as a cause of the greater diameter of the disks, and concludes by saying that he is altogether unable to explain this phenomenon.—M. Murphy (Pennsylvania).

1482. Jackson, E. *Vision for equilibrium and orientation.* *Amer. J. Ophth.*, 1933, 16, 412-416.—Balance is maintained by the combination and coordination of a wide range of impressions, from outside of the body or within it. After a century of discovery and assignment of separate functions to different organs and bodily systems, most mistakes have been made by regarding as local functions that are general. This has been particularly true of balance and orientation. The author notes that the vestibular function no longer holds the commanding position in aviation examination. Vision makes the most general and important contributions to orientation and equilibrium; it puts the subject in touch with objects, near and far, in present and past experience. Coordination is developed with reference to the sense of sight. The author gives many illustrations of failure of coordination in the dark which is immediately rectified when the light is put on.—T. Karwoski (Dartmouth).

1483. Kaye, G. W. C. *The measurement of noise.* *Smithsonian Inst. Rept.* (for 1932), 1933, 159-192.—A discussion of noise, its harmful effects, its measurement, and its reduction in buildings. Illustrated with graphs.—C. M. Louttit (Indiana).

1484. Knudsen, V. O. *Absorption of sound.* *Rev. Sci. Instr.*, 1933, 4, 637-639.—Discussion of a new technique for measurement.—C. H. Graham (Clark).

1485. Köhler, W. *Zur Psychophysik des Vergleichs und des Raumes.* (On the psychophysics of com-

parison and of space.) *Psychol. Forsch.*, 1933, 18, 343-360.—This is a discussion of work done by Jacobs (*Psychol. Forsch.*, 1933, 18, 98) and the results of a dissertation presented by Kleinbub. Jacobs studied the relation of the phenomenal visual space to the psychophysical space correlate. Kleinbub extended Jacobs' work, and instead of confirming it obtained different results. The writer states that there is no need to give up Jacobs' conclusion. Kleinbub changed the conditions by having the subjects turn their eyes from object to object. Both objects are seen on the same retinal place, and regardless of how great their phenomenal distance is, the differential threshold remains the same. The gradient theory of Lauenstein is used to explain the inconsistency. The gradient between two processes is important for comparison and thus for the differential threshold. Lauenstein also made use of the idea that a gradient can exist between a process and a trace instead of between two processes.—J. F. Brown (Kansas).

1486. Korth, C., & Proger, S. H. *The initial drop in temperature of the forearm following a stimulus of hot water to the contralateral extremity.* *Amer. J. Physiol.*, 1934, 107, 55-62.—"Repeated experiments were performed on eight subjects as follows: With a thermo-couple, the temperature of the blood was measured in a superficial vein of the left forearm while the opposite hand was immersed in a warm water bath at 45°. The room temperature was between 15 and 18 degrees. In 5 of the 8 subjects there was a definite drop in the blood temperature after a latent period of several minutes, followed by a marked rise in temperature. Simultaneous with this drop in temperature in the forearm there was an elevation of skin temperature over the trunk and face. The preliminary drop in temperature of the blood in the superficial veins of the forearm is due to a local decrease in blood volume. This local decrease, in turn, is thought to be due to generalized increased vascularity over the trunk and face. It is assumed that the cooling following the loss of blood in the forearm might produce vaso-constriction. Evidence is presented which indicates that under certain conditions vaso-constriction and vaso-dilatation may occur simultaneously in different parts of the skin surface following a single vaso-motor stimulus."—C. Landis (N. Y. Psychiatric Institute).

1487. Lewis, D., & Reger, S. N. *An experimental study of the role of the tympanic membrane and the ossicles in the hearing of certain subjective tones.* *J. Acous. Soc. Amer.*, 1933, 5, 153-158.—In order to discover whether the tympanic membrane and the ossicles are involved in the generation of subjective auditory phenomena (summation and difference tones, harmonies, and hearing the fundamental when not present in a complex wave) the authors experimented with three subjects who had no tympanic membranes or ossicles. Complex tones were presented to these subjects by means of a tone integrator. The subjects were asked to adjust the frequency of a pure tone from a beat-frequency oscillator until the pure tone had a pitch equal to that of the complex

tone. All the subjects set the pure tone pitch approximately equal to that of the subjective tone (to normal ears) set up by the complex wave. The authors conclude that "in normal ears, the membrane and ossicles play only a minor role (if any at all) in the generation of subjective phenomena."—*P. E. Huston* (Worcester State Hospital).

1488. Luckiesh, M., & Moss, F. K. Size of pupil as a possible index of ocular fatigue. *Amer. J. Ophth.*, 1933, 16, 393-396.—Morning and afternoon measurements were made on nine subjects to determine what change, if any, occurred in the pupillary area as a result of close visual work. Dilation of the pupil due to ocular fatigue was found. The effect of the day's use of the eyes is not entirely dissipated by relaxation at night; further relaxation from near visual work is required. The authors suggest that the ocular fatigue reported is due to muscular rather than retinal fatigue.—*T. Karwoski* (Dartmouth).

1489. MacKane, E. A comparison of the intelligence of deaf and hearing children. *Teach. Coll. Contrib. Educ.*, 1933, No. 585. Pp. viii + 47.—The Drever-Collins, Pintner-Paterson, and Grace Arthur performance tests and the Pintner Non-Language Mental Test were given to a group of 130 deaf children, ages 10 to 12, from a New York public school for the deaf and from a residential school for the deaf. The tests were also given to a matched control group. At no age level are the deaf as much as one year retarded. No superiority of the deaf was found at any age level. "In the deaf group, there is apparently no positive relation between residual hearing and intelligence." The bibliography lists 50 titles.—*J. M. Stalnaker* (Chicago).

1490. Marshall, C. R. Looking backwards—an entoptic experiment. *Nature*, 1933, 132, 785-786.—"In a search for the cause of the visual effects experienced under the influence of the Mescal Button, observations were made on entoptic phenomena associated with the retina, and from these it would seem that the human eye can function in a 'verted' as well as in an 'inverted' state: in other words, the sensitive part of the retina can see both ways."—*E. H. Kemp* (Clark).

1491. Metfessel, M. Stroboscopy by means of impressed eye movements or mirror vibration. *Science*, 1933, 78, 416-417.—Description of methods for producing stroboscopic effects by mirror and impressed eye vibrations. Either eye movement, impressed by means of a tuning fork or a barber's vibrator, or mirror vibration provides intermittent stimulation of any given point of the retina, a necessary prerequisite for stroboscopic vision. The use of the voice as a vibrator of the eye and the determination of the pitch of the voice stroboscopically are described.—*P. Seckler* (Radcliffe).

1492. Morel, F. L'écho de la lecture. Contribution à l'étude des hallucinations auditives verbales. (Echo reading. A contribution to the study of verbal auditory hallucinations.) *Encéph.*, 1933, 28, 169.—This phenomenon consists in so anticipating the reading as to render the latter absolutely unintel-

ligible. Patients seem especially embarrassed by the acceleration which the anticipation forces on their reading. The reading is as though doubled, one form being quite mechanical, monotonous, lacking in comprehension and memory possibility, and leading the other at a pace which excludes comprehension and memory. It seems that there are two successive readings very close together, the first breaking into consciousness, giving the patient an impression of impersonal mechanism which is strange to him, and explaining why this reading is attributed to a strange person. The author believes that the most important elements of general sensibility constituting the echo must be sought in the proprioceptors of the respiratory and verbal apparatus. Echo reading occurs in an especially clear-cut and prolonged manner in two disorders. One of these, chronic hallucinatory psychosis, affects women particularly; and the other, sub-acute alcoholic delirium, particularly men. The phenomenon is occasionally found in general paralysis.—*M. H. Piéron* (Sorbonne).

1493. Muskens, L. J. J. La base anatomique des positions forcées des yeux soi-disant paralysés du regard. (The anatomical basis of forced positions of eyes said to be paralyzed in regard.) *Rev. neur.*, 1933, 40, No. 2, 287-296.—*M. H. Piéron* (Sorbonne).

1494. Nafe, J. P. The neurological basis of sensibility of warmth and cold. *Arch. ital. di psicol.*, 1933, 11, 62-68.—The author, indicating problems pertaining to skin sensitivity, calls particular attention to the problem of the source of the heat and cold sensations of the skin. Discussing and comparing the results obtained by other investigators, he arrives at the conclusion that these sensations cannot depend on the excitation of specific peripheral organs, but arise from a mental synthesis taking place during the relaxation and contraction, respectively, of the muscle elements of the peripheral arterioles of the skin.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.).

1495. Piéron, H. (Mme.) Test de sensibilité musculaire. La perception des poids. (Test of muscular sense. The perception of weights.) *Bull. Inst. nat. d'orient. prof.*, 1933, 5, 93-97.—An experiment to discover the fineness of muscular sensation by the method of paired comparisons of weights varying by slight gradations. A tabulation of the results for 270 boys from 9½ to 12 years of age in the Paris schools.—*M. H. Piéron* (Sorbonne).

1496. Piéron, H. (Mme.) Test de sensibilité musculaire. Le gravimètre de Piéron. (Test of muscular sensibility. The gravimeter of Piéron.) *Bull. Inst. nat. d'orient. prof.*, 1933, 5, 143-149.—The gravimeter is an apparatus for measuring the fineness of the appreciation of weights by the method of paired comparisons where the weights are raised by levers. The standardization was made on 250 subjects with four different standard weights of 450, 300, 150, and 75 gms. respectively.—*M. H. Piéron* (Sorbonne).

1497. Ponthus, P. Etude des facteurs physiques qui conditionnent la sensibilité aux couleurs des

parties périphériques de la rétine. (A study of the physical factors which condition the sensitivity of the peripheral retina to colors.) *J. de physiol. et path. gén.*, 1932, 30, 910-928.—It is generally admitted that the fields for colors are less extended than the field for white light and that the color fields decrease in the order blue, red, green, violet. The author shows that this conception depends upon experiments using colored papers in low illumination. It is necessary to determine the extent of the indirect visual field for simple colors using a constant foveal fixation and to consider only those cases where the chromatic sensation is clearly distinguished from a simple luminous sensation. The most important physical factor determining the extent of the color fields is the energy of the ray of light from the stimulus. The extent of the visual field varies directly with the energy of the light. The white and color fields secured with high energy values have the same extent. If the light energies are slight but equal, the visual fields for colors are unequal, sharply concentric, all inferior in extent to the white field, and decreasing in the order white, red, yellow, blue, and green. At all energy values the field for green is less than for the other colors. Bibliography.—*M. H. Piéron* (Sorbonne).

1498. Ponzio, M. Le sensazioni pungenti vengono realmente localizzate meglio di quelle tattili? (Are the pricking sensations really better localized than the tactile?) *Arch. ital. di psicol.*, 1933, 11, 123-130.—In a new series of experiments the author corroborates his finding that pricking sensations in the skin, in the conditions indicated, are on the average better localized than the tactile point sensations. He correlates this fact with the informative value of pricking cutaneous sensations, which from their first appearance in consciousness warn the subject with regard to eventually harmful stimuli.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.)

1499. Ponzio, M., & Angyal, A. Zur Systematik der Gewichtsempfindungen. (On the systematization of weight sensations.) *Arch. f. d. ges. Psychol.*, 1933, 88, 629-634.—On the basis of previously reported experimental findings, the authors maintain that there exists a specific sensation of "lightness" which is not simply a quantitative variation of the sensation of weight. Such a sensation of lightness results when a weight is lifted with disproportionately great muscular tension. The sensory threshold for weight depends not only on the actual weight of the stimulus but also on the tension of the muscle group concerned.—*E. L. Kelly* (Connecticut State).

1500. Ponzio, M., & Angyal, A. Per l'ordinamento delle sensazioni di peso in un nuovo sistema. (The arrangement of the sensations of weight in a new system.) *Arch. ital. di psicol.*, 1933, 11, 69-76.—On the basis of Ponzio's experiments on the phenomena connected with the annulment of perceptions aroused by weights much above the absolute threshold, the authors maintain that there are two qualitatively different forms of weight sensations, which they call sensation of heaviness and sensation of lightness.

Starting from this differentiation, they have been able to establish a new system for weight sensations, which takes into account the bi-valence of the latter, especially with regard to localization. Finally, the authors analyze the physiological conditions of the sensations of lightness and the factors on which depends the absolute threshold of weight sensations.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.)

1501. Ranschburg, P. Sinnesphysiologische und psychologische Erfahrungen an Verkrüppelten. (Sense-physiological and psychological experiences with crippled individuals.) *Arch. ital. di psicol.*, 1933, 11, 49-61.—The author reports observations made on two mutilated individuals: on a handless man and on a man with a hand-foot. During the war a shell splinter tore off from the latter's right hand four fingers and the distal parts of the metacarpal bones, leaving the thumb intact. Thirteen months after the accident the Dutch surgeon J. F. S. Esser cut off the corresponding part from the right leg and joined it with the mutilated hand. Eleven months later the patient was able to use his hand-foot, which also regained its sensitivity to touch, pain and heat, as well as the ability to localize correctly certain tactile impressions, but three-dimensional objects could not be recognized as such. The handless man, at the age of 13 or 14, had suffered the amputation of his upper limbs between the second and third fifth of the fore-arm. From the beginning he tried to make use of his stumps, at first feeling only vague sensations of pressure which in time gained in precision, and he learned to use his stumps for operations of increasing complexity. On examining the surface of the two stumps, a perfect tactile sensitivity was found, even finer than that found in normal fingers.—*R. E. Schwarz* (V. A. Facility, Northport, N. Y.)

1502. Revault d'Allonnes, —. Les phénomènes d' "effet." (The phenomena of "effect.") *Encéph.*, 1933, 28, 103-115.—Normal as well as pathological apperceptive effects bring about psycho-sensorial and psychic fusions. There is fusion and not association when the components cease to be distinct in apperception, for example the visual apperception of roughness and smoothness is a visual-tactual fusion and the "dangerous effect" made by the sight of a dagger is a visual-motor, tactual fusion. The author gives 6 categories of normal perceptive effects: non-illusory psycho-sensory apperceptions which bring about the sensory knowledge of the world; non-illusory mental apperceptions which bring about the introspective knowledge of ourselves; evidence, demonstrations, proof, concept, judgment, and reasoning; normal psycho-sensory illusions, as for example in visual deception by theater decorations; normal mental illusions, as in the case of the witness who swears quite sincerely that he saw or heard things which he only imagined; and normal errors of conception, judgment, and reasoning. There is usually a dominant characteristic in these effects. For example in the stereoscopic effect the visual factor is dominant and appropriates to itself the tactile-motor impressions.—*M. H. Piéron* (Sorbonne).

1503. Rischard, M. Les poisons parasymphatiques et l'accommodation. (Parasympathetic poisons and accommodation.) *Ann. d'ocul.*, 1933, 170, 218-237.—M. H. Piéron (Sorbonne).

1504. Rowland, W. D. Visual field studies. IV. Pseudo-contractions of the upper form field. *Amer. J. Ophth.*, 1933, 16, 496-503.—The author reports data throwing light upon the causation of ptosis (drooping of the upper lid) and suggests the use of perimetry as a means of measuring and recording ptosis.—T. Karwoski (Dartmouth).

1505. Saldmann, J. Sur la visibilité de l'ultra-violet jusqu'à la longueur d'ondes 3130. (Concerning visibility from ultra-violet to wave lengths of 3130.) *C. r. Acad. sci.*, 1933, 196, 1537-1539.—The absorption of ultra-violet by the various media of the eye has been extensively studied, and it is generally admitted that the lens protects the retina against radiations of less than 3200. The author has developed a filter which completely absorbs the radiations of the visible spectrum as well as the initial portion of the ultra-violet and which has good transparency around 3100. When radiations of less than 3350 pass through the filter, one can distinguish a lavender halo and, depending on the brightness, a violet or bluish image of the source. The author has studied the variation of this visibility with age upon 102 normal adult subjects. The experiments show that visibility in the region of 3130 is constant in youth and disappears progressively between 34 and 43 years of age. In this period, 20 subjects saw with both eyes, 2 saw with only one eye, and 7 saw nothing. The human lens is not as opaque as has been supposed, and the above loss of sensitivity can be used as a sign of ageing in the lens, perhaps a diagnostic sign of the beginning of ocular sclerosis.—M. H. Piéron (Sorbonne).

1506. Schriever, H., & Hegemann, F. La sommation dans les excitations sensorielles. (Summation in sensory excitations.) *C. r. Soc. biol.*, 1933, 113, 720-722.—As in pain so in many other sensory excitations there may be a summation of the effects of electrical discharges. The authors have found a very clear summation for cold, and taste shows the same order of magnitude in summation as pain. In vertigo there is a summation, but smaller. Vision does not reveal a noticeable summation. The author believes that these summations may be traced to a peripheral process rather than to central processes in the cord or brain.—M. H. Piéron (Sorbonne).

1507. Schubert, G. Eine praktische bedeutsam optische Täuschung beim Fluge in grösseren Höhen. (A practically significant optical illusion in flying at high altitudes.) *Zsch. f. Sinnesphysiol.*, 1932, 62, 326-331.—In descending rapidly from a high altitude surfaces or objects, standing out upon the background as a result of brightness, color, or contour, do not increase in apparent size in proportion to the increase in the visual angle; but on the contrary, these surfaces, such as a large pond, a meadow, an open space in a city, or the landing field itself, seem to become smaller while surrounding objects, less sharply de-

fined, appear more extensive. The illusion in relative size does not disappear until an altitude of from 200 to 500 meters is reached. The author explains this phenomenon largely on the basis of central factors, particularly attention.—M. Murphy (Pennsylvania).

1508. Verhoeff, F. H. An improved and a new test for stereoscopic vision. *Amer. J. Ophth.*, 1933, 16, 589-591.—The author describes a new test for stereoscopic vision which requires no depth perception as a basis. The test consists of an ordinary stereoscopic slide in the form of two circles which contain slightly disparate lines. One circle is shaded to appear dark gray, while the other is left white. When these circles are fused the background of the circles is seen lustrous by stereoscopic vision and the position of the lines is shifted in the direction of the brighter circle. Means are provided in the stereograms for the detection of eye dominance in the fusion. Thus these stereograms are based on the perception of luster, and on the fact, observed by Verhoeff, that when two disparate images are made unequal in intensity the position of the image resulting from their fusion is shifted towards the more intense image. The two stereograms described are reproduced in the article.—T. Karwoski (Dartmouth).

1509. Wald, G. Vitamin A in the retina. *Nature*, 1933, 132, 316-317.—The author has found vitamin A in considerable concentrations in solutions of the visual purple, in intact retinas, and in the pigment-choroid layers of frogs, sheep, pigs, and cattle. The physiological significance of the presence of vitamin A in the eye tissues will be discussed in detail elsewhere, with particular emphasis on the relation of the presence of the vitamin in the eye to optic disorders which are the specific symptoms of its absence from the diet.—E. H. Kemp (Clark).

1510. Wang, S. B., & Lyman, R. S. A sensory test for Chinese. Recognition of Chinese characters traced on the skin of soldiers with brain-injuries. *Chinese Med. J.*, 1933, 47, 468-482.—4 literate Chinese soldiers with partially healed lesions involving the cerebral cortex behind the sulcus centralis were presented visually with the list of characters for one or two minutes. Then, with eyes closed, the characters were tactually presented on the cutaneous areas of the four extremities. While normal individuals could recognize characters composed of 4 and even 6, 7, or 8 strokes the injured soldiers could not successfully identify characters composed of 4 strokes.—K. C. Pratt (Michigan Central State Teachers College).

1511. Waterston, D. On pain. *Lancet*, 1933, 224, 943-946.—In an investigation of cutaneous sensation support is given to Head's view that the tactile and pain mechanisms are anatomically separate. The layer of epidermis which contains end organs for tactile sensation may be shaved from the tips of the fingers without arousing pain. Nerve endings for pain may be found in the corium. Several considerations indicate that the nerves accompanying the capillary blood-vessels convey the pain impulses. Acute pain of a distinctive character could be aroused

from the walls of arteries, while veins were much less sensitive. Muscles have a pain apparatus which is usually excited by such a stimulus as spasmodic contraction, as in cramp, or by contraction with impaired blood-supply, rather than by mechanical injury.—*D. J. Ingle* (Minnesota).

1512. Williams, R. D. A possible explanation of one type of color blindness. *Amer. J. Ophth.*, 1933, 16, 803-806.—The author offers an explanation for green color blindness, which is characterized by the following facts: (1) normal visual acuity to white; (2) perception of yellow when stimulated by the red-green region wave-lengths; (3) no response to wave-lengths in the green region; (4) very slightly enhanced visual acuity to stimulation with red region wave-lengths; (5) a very great enhancement of visual acuity in response to stimulation of wave-lengths of the blue region. The author's explanation is based on Fick's hypothesis, which, however, explains only the first three of the above facts. By assuming that four times as many blue receptor cones as either red or green are functioning, the author attempts to explain the facts of acuity. By making the blue cones contain only one half of the liquid of the normal blue cone the facts of color mixture are not violated.—*T. Karwoski* (Dartmouth).

1513. Wolff, E. The anatomy of the eye and orbit: including the central connections, development, and comparative anatomy of the visual apparatus. London: H. K. Lewis & Co., Ltd., 1933. Pp. viii + 310. 31/6.—*E. H. Kemp* (Clark).

[See also abstracts 1557, 1569, 1613, 1619, 1620, 1621, 1628, 1630, 1631, 1632, 1633, 1637, 1649, 1678, 1683, 1794, 1796, 1872, 1889, 1892.]

FEELING AND EMOTION

1514. Dumas, G. L'expression de la peur. (The expression of fear.) *Encéph.*, 1933, 28, 1-10.—The author presents photographs of the expression of fear. In the neuro-vegetative reactions of fear the author distinguishes the responses of arrest or paralysis and the active responses corresponding to two forms of the emotion. Passive and active expressions are also noted. In passive expression the problem is one of inhibition. In active expression it is necessary to distinguish two very different varieties according as it is a question of mental tension and apprehension or of a fear actually realized. The author also indicates that the optic mechanism appears to regulate chronaxy of the neuro-motor centers. Emotional disturbances of the optic mechanism may introduce correlative disturbances either in the attitudes or in the transmission of movements. The greater the disturbance the greater the disharmony.—*M. H. Piéron* (Sorbonne).

1515. Goodall, J. S., & Rogers, L. The effects of the emotions in the production of thyrotoxicosis. *Med. J. & Rec.*, 1933, 138, 411-415.—The authors analyze 103 cases in which an acute thyrotoxicosis immediately followed some profound emotional disturbance. Emotional shock may also activate

non-toxic goiter, and infections and bodily and mental fatigue may pave the way for its action. The precise mechanism which fixes the terror in these thyrotoxicosis cases is obscure. The persistence of the stimuli may be due to the fact that they cannot be eliminated naturally by completion of the emotional impulse, either because of the recurrence of the original stimuli or because of association with a common object which forms part of a conditioned reflex. The curious disparity of thyrotoxicosis among soldiers and sailors in the World War is noted. The sailors' immunity was possibly due to their more controlled life and the absence of fatigue, the rapidity of the decision, and the fact that the sailor cannot see the details of the fighting.—*M. E. Morse* (Catonsville, Md.).

1516. Joltrain, E. L'émotion facteur de déséquilibre humoral. (Emotion as a factor in humoral disequilibrium.) *Presse méd.*, 1933, No. 45, 905-907.—Whenever any environmental disturbance has aroused a reverberation in the network of psychic activity there is an emotional shock which leads to organic reactions. A slight emotion which causes no trouble in a subject with a stable nervous system produces reactions quite out of proportion to the stimulus in subjects with unstable nervous systems. These shocks arouse humoral disturbances which may be favorable or unfavorable and which modify the albumin condition of the blood, the quantity of calcium or magnesium ions, the alkaline reserve, and particularly the pH.—*M. H. Piéron* (Sorbonne).

1517. Laforgue, R. La bipolarité affective. (Affective bipolarity.) *J. méd. fr.*, 1933, 22, 124-125.—The author applies the term affective bipolarity to the tendency of the individual to seek in himself the complement of his aspirations and thus to exhaust his energy. The affective valences of the individual who should turn himself toward the external world undergo a species of auto-saturation ending in the indifference of the subject toward all that occurs outside himself.—*M. H. Piéron* (Sorbonne).

1518. Nice, L. B., & Fishman, D. Changes in the viscosity of the blood in normal, splenectomized and adrenalectomized animals following emotional excitement. *Amer. J. Physiol.*, 1934, 107, 113-119.—"Venous blood had a higher viscosity than arterial, the two types averaging 4.32 and 3.77 respectively in our normal rats. In the rabbits the former averaged 3.61, the latter 3.37. The viscosity of the blood of the normal animals was increased 21.8 per cent following emotional excitement in the rats and 12.5 per cent with the rabbits. The viscosity of the blood in adrenalectomized rats was higher than in the controls, both in the quiet and emotionally excited states. In the splenectomized rats two days after the operation the viscosity was higher than normal in the quiet state, but the increase after emotional excitement was less than with normal rats, viz., 15 per cent. After four days the viscosity decreased markedly both in the quiet and excited states."—*C. Landis* (N. Y. Psychiatric Institute).

1519. Staples, R., & Walton, W. E. A study of pleasurable experience as a factor in color preference.

J. Genet. Psychol., 1933, 43, 217-223.—After being tested for color preferences among red, yellow, green, and blue lights, 13 children were given toys, whenever lights of particular colors appeared; and later they were retested for preferences. The pleasurable experiences with a given color produced decided increases in its preference-value, as shown in the retests with lights and in transfer tests with similarly colored papers and blocks. These preferences were retained after a five-month interval.—*J. F. Dashiell* (North Carolina).

[See also abstracts 1720, 1854, 1869, 1878, 1893.]

ATTENTION, MEMORY AND THOUGHT

1520. Chang, T. S. A study of visual attention and position. *Chung Hua Educ. Rev.* (Chinese), 1933, 21, 51-57.—This experiment aims to study visual attention to objects on a horizontal plane. Cards with words and numbers are used as materials and are presented to the subjects in various ways. It is found that visual attention is a complex response, and that at the change of even a part of the situation, the whole thing will change too. It is the method of presentation which is responsible for such a change. Several things may be noted: (1) objects in the more stable position on the plane will attract attention more easily, while in the moving position it requires a longer time to concentrate attention; (2) pictorial illustrations must be put at a comparatively stable position in the page; for instance, in textbooks printed from right to left, pictures and diagrams should be placed at the left half of the page, while in textbooks printed from left to right, the position should be reversed.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1521. Goldberg, N. [E. L. Thorndike: psychology of learning.] *Unser Schul*, 1933, 3, No. 6, 12-19.—A review of some of Thorndike's contributions to the field of learning.—*D. Shakow* (Worcester State Hospital).

1522. Hausen, L. Das inhaltliche Gedächtnis. (Memory for meaningful material.) *Arch. f. d. ges. Psychol.*, 1933, 88, 635-686.—Series of 10 words, 10 pairs of words, and medium length sentences were read aloud to 10 adult subjects, who were asked immediately to repeat what they had heard. The retained parts of each series were then analyzed both quantitatively and qualitatively in order to determine the relationship between type of material and the amount of retention. For the single word series, retention was best for single-syllable words, poorest for three-syllable words. Concrete nouns were retained better than other types of words. In general, the first half of the series of word pairs was better retained than the last half. The length of the sentences, their grammatical construction, the presence of foreign words, of dominating words, and an understanding of the meaning all proved important factors in determining the portion of the statements remembered. An attempt was made to relate the performance of the individual subjects to their imagery and

temperamental traits.—*E. L. Kelly* (Connecticut State).

1523. Kern, G. Motorische Umreissung optischer Gestalten. (Motor sketching of visual Gestalts.) *Neue Psychol. Stud.*, 1933, 9, 69-108.—The subjects had to design with free movements of the hands the contours of simple visual figures in space. It was shown that such motor shaping is directed by a peculiar internal law. Correct and incorrect movements differ from each other through the kind of organization of the separate motor impulses.—*O. Klemm* (Leipzig).

1524. Many, J. El pensament i la imatge. (Thought and image.) *Criterion*, 1933, 9, 113-161.—Many gives a comprehensive review of the problem from the time of the scholastics to the present. Although the existence of imageless thought has been much discussed, the presence of images without thought has been little studied. Introspection shows that there are cases in which the intelligence spontaneously and immediately seizes upon the image; and conversely there are other cases in which consciousness registers clearly the existence of images without the accompaniment of any intellectual activity (judgment, relationship, etc.). In the first case, the image has interest for the intelligence; in the second, the intelligence is not stimulated to follow up the image. Expressed as a general law: the power of the image to attract intellectual activity is variable and depends objectively on the interest which imaginal continuation presents to the intelligence, and subjectively on the promptness or the sensitiveness to stimulation of the intelligence. This law has a bearing on the psychology of talent.—*M. E. Morse* (Catonsville, Md.).

1525. Maritain, J. Distinguer pour unir ou les degrés du savoir. (Distinguishing in order to unite, or the degrees of knowledge.) Paris: Desclée de Brouwer, 1932. Pp. 919.—The author supports a hierarchy of the forms of knowledge. An appendix presents a collection from the texts of Saint Thomas relative to the concept.—*M. H. Piéron* (Sorbonne).

1526. Marzi, A. Ricerche sull' attenzione distributiva. (Researches on distributed attention.) *Riv. di psicol.*, 1933, 29, 129-142.—Certain researches were organized in order to study the effects on the quality and quantity of production during the performance of two or three simultaneous and continuous tasks. The results of a first series of experiments are analyzed and the methods adopted by the individual subjects in the distribution of their attention are discussed.—*T. M. Abel* (Sarah Lawrence).

1527. Restorff, H. v. Ueber die Wirkung von Bereichsbildungen im Spurenfeld. Analyse von Vorgängen im Spurenfeld. I. Von W. Köhler und H. v. Restorff. (On the effect of field formations in the trace field. Analysis of processes in the trace field. I. By W. Köhler and H. v. Restorff.) *Psychol. Forsch.*, 1933, 18, 299-342.—The attempt was made to mark off retroactive inhibition from related phenomena. It was found by presenting material such as classical memory psychology has used that in

monotonous series of homogeneous material intensive forces act which tend to abolish what has been learned. Members of a series which are not given in such a monotonous repetition reach far higher reproduction values. Thus the injury to learning rests not simply on the proximity of other homogeneous members, but on the formation of fields and on absorption of the members in the fields, which is favored by the even course of the series. Testing recognition instead of reproduction leads to the same result, although in a weaker form. Retroactive and pre-active inhibition are forms of the same injury to learning.—J. F. Brown (Kansas).

[See also abstracts 1464, 1465, 1466, 1756, 1878, 1887.]

NERVOUS SYSTEM

1528. Adrian, E. D. The activity of nerve cells. *Nature*, 1933, 132, 465-468.—The nervous system is responsible for the working of the organism as a whole, and the activity of its cells, their growth and metabolism present problems. For a long time investigators have concerned themselves with the arrangement of the network of nervous pathways, but the present trend is in the direction of the explanation of this arrangement. Detweiler's recent review suggests that the detail of this arrangement depends not so much on the innate properties of particular cells as on the environment provided by the rest of the organism. The nervous elements, the neurons, show activity which consists of a series of rapid alterations between the resting and the active state. This activity, in fibers or in cells, may be studied from the analysis of electrical changes which are set up by it. Impulses in nerve fibers are alike in magnitude and rate of travel but vary in the frequency at which they recur. Electric oscillations in central gray matter are large and occur constantly, but the waves differ from those in the fibers in that the contours are more smooth, i.e. the potential changes are more gradual. When we come to the problem of the functioning of the nervous system as a whole, we encounter many difficulties. Lashley has found that anatomical models of the nervous system do not give a true picture of the manner of its function.—E. H. Kemp (Clark).

1529. Barraquer, L. Etude expérimentale sur les fonctions des lobes frontaux. (An experimental study of the functions of the frontal lobes.) *Rev. neur.*, 1933, 40, No. 4, 484-487.—The alteration of the frontal zone produces intellectual disorders and the loss of the epicritic control of the sphincters. There is also a disturbance of topographical memory which is internally apparent in orientation. All animals have the equilibrical system controlled by the frontal lobes. The labyrinth serves as a receptor for external stimulations; the cerebellar center governs the equilibrium of movements, but it plays a less important role in orientation, which depends principally on the frontal lobes.—M. H. Piéron (Sorbonne).

1530. Bishop, G. H., Heinbecker, P., & O'Leary, J. L. The function of the non-myelinated fibers of the dorsal roots. *Amer. J. Physiol.*, 1933, 106, 647-669.—Non-myelinated fibers of the dorsal roots of the peripheral nerves include motor vasodilator fibers with cells of origin in the dorsal root ganglia, accessible to reflex activation via synapses within the cord. Such fibers do not mediate any of the common afferent functions; and in particular, all types of pain may be accounted for without reference to such fibers.—C. Landis (N. Y. Psychiatric Institute).

1531. Blair, E. A., & Erlanger, J. A reply to Bishop and Heinbecker's "Fiber distribution in optic and saphenous nerves." *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 127-128.—The authors point out a serious misinterpretation of a statement by them. They restate their position as follows: "In so far as the doctrine of specific nerve energies is concerned, the point we wished to make . . . was that since it is possible to distinguish in the fibers of a nerve a very wide and apparently continuous range in the characters of their responses the possibility exists of a transmission of impulses along paths in the central nervous system adapted to impulses of specific configurations."—P. Seckler (Radcliffe).

1532. Bourguignon, G. Triple chronaxie vestibulaire. (Triple vestibular chronaxy.) *C. r. Acad. sci.*, 1933, 197, 352-354.—The author measured the threshold of the reflex of bending the head and found the chronaxic values to lie between 12 and 22 sigma with normal subjects. By changing the place of attaching for the electrodes, he was able to measure separately the chronaxies of the three semi-circular canals. With an increasing rheobase, three movements were found in the three dimensions of space and three vestibular chronaxies. Thus it may be supposed that one is measuring the chronaxies of the canals or of the nerve fibers which innervate them. The horizontal canal has the smallest chronaxy, the sagittal vertical canal the middle chronaxy, and the lateral vertical canal the largest chronaxy. The relationship of the smallest to the middle chronaxy and of the middle to the largest is as 1 to 2. The order of the rheobases is inverse to that of the chronaxies.—M. H. Piéron (Sorbonne).

1533. Bronk, D. W. Nerve messages. *Scient. Mo.*, 1933, 34, 546-549.—J. F. Dashiell (North Carolina).

1534. Carlton, H. H. The optic tectum and its related fiber tracts in blind fishes. *A. Troglichthys rosae* and *Typhlichthys eigenmanni*. *J. Comp. Neur.*, 1933, 57, 285-325.—Primarily morphological. A small optic nerve is described and interpreted as representing an efferent pathway, the tractus pre-optico-opticus. Also some new fiber tracts and commissures are described.—C. P. Stone (Stanford).

1535. Chauchard, A., Chauchard, B., & Denissoff, P. Variations de la chronaxie de l'écorce cérébrale sous l'influence des excitations thermiques périphériques. (Variations in the chronaxy of the cerebral cortex under the influence of peripheral thermal stimulation.) *C. r. Soc. biol.*, 1933, 113, 596-598.—

In the waking animal the excitability of the cortical motor zones presents a series of variations of the rheobase and of the chronaxy in relation to the centripetal influx. The experiments presented involved a determination of the cortical chronaxy in the normal state and after thermal stimulation of the extremities. In the latter case cortical excitability changed considerably, being lowered for cold and raised for heat. If a second stimulation succeeds the first before a normal condition is reached the two effects are added together. It seems to the authors that these changes of chronaxy can be explained only by a neural mechanism.—*M. H. Piéron* (Sorbonne).

1536. *Chauchard, A., Chauchard, B., & Denissoff, P.* Mesure de la réaction de l'écorce des deux hémisphères cérébraux aux excitations thermiques périphériques et unilatérales. (Measure of the reaction of the cortex of the two cerebral hemispheres to peripheral unilateral thermal stimulation.) *C. r. Soc. biol.*, 1933, 113, 826-828.—Peripheral thermal stimulations by cold lower the chronaxy of the cerebral cortex while stimulations by heat raise it. These modifications extend not only to the different motor zones of one hemisphere but to the zones of both hemispheres, the modifications being always in the same direction. This seems to demonstrate the effect of incoming stimulations upon the excitability of nervous centers, an influence which it is possible to determine quantitatively by measures of chronaxy.—*M. H. Piéron* (Sorbonne).

1537. *De Almeida, M. O.* Sur le rôle des excitations internes de l'appareil digestif dans le maintien du tonus nerveux général. (Concerning the role of internal excitations from the digestive apparatus in the maintenance of general nervous tonus.) *C. r. Soc. biol.*, 1933, 113, 211-213.—Mechanical stimulations from the digestive apparatus are incapable of replacing peripheral stimulations coming from the skin or from the sense organs in their role of maintaining the general tonus of the nervous system.—*M. H. Piéron* (Sorbonne).

1538. *De Crinis, M.* Die Entwicklung der Grosshirnrinde nach der Geburt in ihren Beziehungen zur intellektuellen Ausreifung des Kindes. (The post-natal development of the cerebral cortex in relation to the intellectual maturation of the child.) *Wien. klin. Woch.*, 1932, 45, 1161-1165.—Histological investigation of 68 brains (birth to 13 yrs. in age) reveals a development especially of the ganglia-cell dendrites with increase in age. The maturation process is not general over the cortex, but certain areas such as the sensory projection fields develop first, followed by the development of the adjacent areas. There is thus provided a morphological basis in the cortex for the intellectual maturation of the individual. The histological changes are illustrated by a series of plates.—*K. C. Pratt* (Michigan Central State Teachers College).

1539. *Erlanger, J., & Blair, E. A.* The configuration of axon and "simple" nerve action potentials. *Amer. J. Physiol.*, 1933, 106, 565-570.—"It is shown that the temporal configuration of an action potential

initiated by an induction shock and led from the stimulated point differs materially from that of an axon potential similarly obtained but by a method circumventing the distortion of the start by the stimulus artifact. The axon potential thus obtained exhibits (1) a low short foot which can be accounted for by the width of the common electrode separating the stimulated point from the lead, terminated (2) by a rise that is linear to within 80% of the crest. It is concluded that the action potential mounts linearly from its inception. The configuration of the 'simple' action potential is considered in the light of these findings and of the variations in the latency of response, and in the irritability, of axons."—*C. Landis* (N. Y. Psychiatric Institute).

1540. *Foerster, O., & Gagel, O.* Ueber afferente Nervenfasern in den vorderen Wurzeln. (Afferent nerve fibers in the anterior roots.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1933, 144, 313-324.—Faradic stimulation of the central portion of a sectioned anterior root of a spinal nerve arouses pain. Also, after resection of posterior roots to eliminate pain, pain often recurs after some time, indicating that sensory fibers are contained in the anterior roots. Histological studies of man and of *Macacus rhesus* lead to the same conclusion.—*C. W. Fox* (Rochester).

1541. *Graham, H. T.* A late period of subnormal irritability following nerve response. *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 193-194.—A late subnormal irritability period following the refractory periods and the supernormal period has been made to appear by poisoning the nerve with yohimbine. Using the isolated yohimbinized sciatic nerve of *Rana pipiens*, cathode ray oscillograph observations showed a somewhat longer relative refractory period, a shorter supernormal period, and a late subnormal period lasting 5 to 10 seconds after the conditioning shock. Strong yohimbinization may largely remove the supernormality and prolong late subnormality to 16 to 32 seconds. Distinctions between this late subnormal period and the refractory period are drawn. Certain other changes in nerve function produced by yohimbine, as well as the action of other substances, such as cocaine, procaine, and quinine in producing the subnormal period are described.—*P. Seckler* (Radcliffe).

1542. *Haller, T.* Untersuchungen über den Einfluss des Sympathikus auf die Muskeltätigkeit unter natürlichen Bedingungen mit Hilfe von Aktionsströmen. (Investigations of the influence of the sympathetic on muscular activity under natural conditions with the help of action currents.) *Zsch. Biol.*, 1932, 92, 555-561.—(*Biol. Abst.* VII: 21061).

1543. *Heinbecker, P., & O'Leary, J.* The mammalian vagus nerve; a functional and histological study. *Amer. J. Physiol.*, 1933, 106, 623-646.—By coincident recording of the electrical potential of the vagus nerve and the effect on the organism resultant from electrical stimulation of this nerve trunk it was possible to correlate body function with fiber group activity. It was shown that this nerve contains four functional fiber groups, somatic motor and

somatic sensory fibers, autonomic myelinated and non-myelinated fibers. The motor fibers lead to the heart and are derived from cells located within the central nervous system. The non-myelinated fibers lead to constriction of the bronchi and excitatory and inhibitory effects of the duodenum, and arise from cells located within the nodose ganglion. All afferent functions served by the vagus nerve are mediated by myelinated fibers of the somatic type. The non-myelinated fibers serve no recognizable afferent function.—C. Landis (N. Y. Psychiatric Institute).

1544. Hill, A. V. Wave transmission as the basis of nerve activity. *Scient. Mo.*, 1933, 37, 316-324.—Oscillatory phenomena in general are of two types; that of nerve conduction as well as muscular and glandular action is of the type of the discharge of a potential when its capacity has been reached, in which are distinguishable the reactive and the refractory stages. The electrical accompaniment of messages passing along nerve fibers can be rendered visible and audible through the oscillograph. The single nerve fiber in man is incapable of conducting impulses faster than 1000 to 2000 per second, and then for only a brief time; to higher frequencies, the response must be in submultiples thereof. But as a nerve consists of numerous individual fibers, and these may be out of phase with one another, it is able to conduct a frequency many times higher.—J. F. Dashiell (North Carolina).

1545. Hinsey, J. C. The functional components of the dorsal roots of spinal nerves. *Quar. Rev. Biol.*, 1933, 8, 457-464.—In mammals the law of the dorsal roots holds, as they contain only centripetal fibers. Efferent fibers are found in the dorsal roots of amphibians, reptiles and birds.—O. W. Richards (Yale).

1546. Hirschberg, E. Schwellenbestimmungen an antagonistischen Nerv-Muskel-präparaten mit Kondensatorentladungen verschiedener Frequenz. (Threshold determinations on antagonistic nerve-muscle preparations with condenser discharges of different frequencies.) *Zsch. Biol.*, 1932, 92, 241-253.—(*Biol. Abst.* VII: 21063).

1547. Hoffmann, F., Holzlöhner, E., & Leegaard, F. Die Wärmebildung des überlebenden Froschrückenmarkes. (The heat elaboration of surviving frog spinal cord.) *Zsch. Biol.*, 1932, 93, 108-120.—(*Biol. Abst.* VII: 21064).

1548. Kornmüller, A. Die bioelektrischen Erscheinungen der Grosshirnrinde. (The bioelectric phenomena of the cerebral cortex.) *Fortsch. Neur. Psychiat. u. Grenzgeb.*, 1933, 5, 419-441.—The work of this experiment was performed on rabbits, rats and apes. Local anesthetics were used. The general conclusions at which the author arrived were: (1) that the normal cerebrum may be differentiated regionally on the grounds of its bioelectric phenomena; (2) that single cerebral areas in their bioelectric relationships are spatially consistent with architectonic and morphological characteristics; (3) that the differences between characteristic bioelectric areas are qualitative, quantitative, and temporal, and the bioelectric areas are

linearly and sharply delimited, as are the architectonic; (4) that most probably the ganglion cells of the brain are the producers of the bioelectric effects in the cerebral hemispheres.—D. S. Oberlin (Newark, Del.).

1549. Labes, R. Nerv und Membrankernleiter. I. Die Bedeutung der Kernleitererscheinungen für den Nerven und die Theorie der Vorgänge im einzelnen Kernleiterabschnitt. (Nerve and membrane core conductor. I. The significance of core conductor manifestations for the nerves and the theory of the events in a single core conductor section.) *Zsch. Biol.*, 1932, 93, 42-72.—(*Biol. Abst.* VII: 21066).

1550. Lambert, E. F., Skinner, B. F., & Forbes, A. Some conditions affecting intensity and duration thresholds in motor nerve, with reference to chronaxie of subordination. *Amer. J. Physiol.*, 1933, 106, 721-737.—In a careful, critical experimental investigation of the facts and theories of chronaxy as advanced by Lapicque, it has been shown that chronaxy is an inaccurate measure of changes of time under conditions of a changing rheobase, such as have been reported to occur upon release of the peripheral nerve from subordination. In general Lapicque's earlier theories of *chronaxie de subordination* were not corroborated.—C. Landis (N. Y. Psychiatric Institute).

1551. Lehmann, G. Ueber einen möglichen humoralen Wirkungsmechanismus bei Reizung sympathischer Nerven zu den Muskeln. (On a possible humoral effector mechanism in the stimulation of sympathetic nerves to muscles.) *Zsch. Biol.*, 1932, 92, 391-402.—(*Biol. Abst.* VII: 21069).

1552. Magoun, H. W., & Ranson, S. W. Loss of pupillary light reflex resulting from lesions in the region of the posterior commissure. *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 183-184.—The pupillary light reflex in both eyes of cats and dogs was completely and permanently obliterated by placing small electrolytic lesions in the pretectal region on each side of the posterior commissure. These experiments confirm the conclusions drawn from previous stimulation experiments that the pupillary light reflex is mediated through the pretectal region and not through the superior colliculus.—P. Seckler (Radcliffe).

1553. Rosett, J. Intercortical systems of the human cerebrum: mapped by means of new anatomic methods. New York: Columbia Univ. Press, 1933. Pp. 135. \$3.00.—This volume, which contains a foreword by Adolph Meyer and a preface by Stanley Cobb, describes and illustrates the author's work in mapping the intercortical nerve fibers. The method employed involves fixing the specimen, wrapping it in bandages, subjecting the specimen to a high gas pressure, and then exploding the specimen by rapidly releasing the gas. The result is a dissection along the natural lines of cleavage. After staining, sections may be prepared. The conception of the intercortical fibers as U-fibers is only partially substantiated. The picture is one of great complexity, some fibers running transversely to the fissures and others diagonally. The cerebrum is essentially a surface

organ with relatively few radial fibers.—W. S. Hunter (Clark).

1554. [Various.] **American Association of Anatomists.** *Anat. Rec.*, 1932, 52 (Suppl. Feb.), 1-81.—Abstracts of papers presented at the 48th annual session: H. W. Magoun, R. W. Barris, and S. W. Ranson, Stimulation of the hypothalamus with the Horsley-Clarke stereotaxic instrument, p. 24. L. O. Morgan and P. P. Goland, The accelerator nerve and postganglionic parasympathetic fibers in the vagus of the dog, p. 26. Section of the nerve proximal to nodose ganglion, with experimental study of intact fibers, in dog. S. W. Ranson and W. R. Ingram, Stimulation of the mesencephalic tegmentum with the Horsley-Clarke stereotaxic instrument, p. 31. W. M. Rogers, Physiological responses of limbs with both independent and dual innervation in *Amblystoma*, p. 32. W. K. Smith, The electrically responsive areas of the cerebral cortex of the black bear (*Ursus americanus*), p. 35. D. G. Marquis, Brightness discrimination in dogs after removal of the striate cortex, p. 67. R. R. Sears, The effect of optic-lobe ablation on visuomotor behavior in goldfish, p. 75.—(*Biol. Abst.* VII: 21055).

[See also abstracts 1464, 1465, 1466, 1467, 1583, 1590, 1593, 1595, 1603, 1604, 1605, 1623, 1624, 1640.]

MOTOR PHENOMENA AND ACTION

1555. [Anon.] **The chemistry of muscular contraction.** *Nature*, 1933, 132, 683-684.—"The chemical changes occurring in a muscle during activity are considered at the present time to be as follows: Phosphagen is reversibly hydrolysed into creatine and orthophosphate to provide the energy of contraction, its synthesis being at the expense of the energy derived from the breakdown of adenylyl-pyrophosphoric acid into inosinic acid, phosphate and ammonia. The reconstitution of the latter compound depends on the energy obtained from the breakdown of glycogen to lactic acid, the presence of magnesium ions also being necessary: part of the lactic acid—one-fourth only—is then oxidised whilst the remainder is probably resynthesised again to glycogen."—E. H. Kemp (Clark).

1556. Benedict, F. G. **Le métabolisme de base chez les différentes races.** (Basal metabolism in the different races.) *Biotypol.*, 1933, 1, 49-54.—The author approves of the view that the factor of race must be added to the list of factors affecting basal metabolism.—M. H. Piéron (Sorbonne).

1557. Bonvallet, M., & Rudeanu, A. **Rôle des canaux semi-circulaires dans la régulation des chronaxies motrices périphériques.** (The role of the semi-circular canals in the regulation of the motor peripheral chronaxies.) *C. r. Soc. biol.*, 1933, 113, 1184-1186.—These experiments show that in the pigeon the semi-circular canals are part of the peripheral organs which normally share in the phenomena of subordination and aid in maintaining the chronaxies of the antagonistic muscles in a 1:2 relation.

Furthermore, the chronaxic disorders resulting from lesions disappear rapidly as the behavior of the animal becomes normal, confirming the close relationship existing between behavior and the integrity of the 1:2 relationship between the motor points of antagonistic nerves.—M. H. Piéron (Sorbonne).

1558. Borsarelli, F., & Pochino, M. **Di alcuni riflessi nella prima infanzia.** (Concerning certain reflexes in early infancy.) *Pediatrics*, 1933, 41, 1147-1163.—The genetic development and interrelations of the following reflexes are traced in some 200 infants ranging from birth to 12 months in age: Babinski, Poussep, *signe d'éventail*, Schaffer, Gordon, Oppenheim, Pierre-Marie, Rossolimo, Mendel-Bekhterev, triple retraction of the lower limb, Souques, prehension, and Klippel.—K. C. Pratt (Michigan Central State Teachers College).

1559. Britton, S. W., & Silvette, H. **On the function of the adrenal cortex—general, carbohydrate and circulatory theories.** *Amer. J. Physiol.*, 1934, 107, 190-206.—"There is a shift in water balance in the adrenalectomized animal which occurs with the development of symptoms of insufficiency: the liver particularly and also the muscle show increased hydration while the blood becomes dehydrated. The organism as a whole (rat) nevertheless contains more water than normal. The blood volume commonly (but not in all cases) is reduced after adrenalectomy. Injections of saline readily restore the circulatory volume, but without affecting the general condition or survival period of the adrenalectomized animal. The liver glycogen becomes practically depleted, the blood glucose very critically reduced, and the muscle glycogen markedly decreased in adrenalectomized guinea pigs, cats, and marmots. In rats there is a marked reduction of liver glycogen. Emotional excitement and adrenalin injection are practically without effect on the blood glucose of adrenalectomized cats tested at various time intervals after operation while the animals still appear in good health. Sodium lactate and glucose injections result in no significant glycogen storage in adrenal-less animals compared to normal controls. In cases of long-continued, twice-daily injections of glucose during the period following adrenalectomy, there also occurs very little storage of glycogen in the liver. There is no water lack in adrenalectomized animals with symptoms of insufficiency. The carbohydrate loss alone, however, is sufficiently critical to cause death. Death in convulsions is typical of hypoglycemia, and not of a low blood volume. The results do not support a proposed circulatory theory of the function of the adrenal cortex. They do offer further strong evidence in favor of the carbohydrate theory of cortico-adrenal function."—C. Landis (N. Y. Psychiatric Institute).

1560. Bryngelson, B., & Clark, T. B. **Left-handedness and stuttering.** *J. Hered.*, 1933, 24, 387-390.—Two unrelated family trees involving both left-handedness and stuttering are presented. In these charts both anomalies could be reasonably regarded as recessive traits. Ambidexterity in some of the individuals may be due to left-handed tendencies not

responding completely to right-handed training; in other cases there may be varying degrees of inherent handedness. The authors favor the view that stuttering is produced by altering the native unilateral lead, or is due to a lack of a dominant physiologic lead in either cerebral hemisphere. Among 127 school children who stuttered, the senior author found that 81% had been shifted from left to right in handedness.—*B. S. Burks* (California).

1561. **Corey, E. L., & Britton, S. W.** The ovarian cycle and the adrenal glands. *Amer. J. Physiol.*, 1934, 107, 207-212.—"Adrenalectomy resulted in the complete suppression of the estrous cycle in 34 out of 39 operated rats. Residual or accessory cortical tissues are possibly responsible for the persistence of estrus in a small percentage of adrenalectomized animals. The administration of cortico-adrenal extract to normal rats may (a) influence the ovarian cycle in the direction of increased activity, (b) produce no effect, or (c) result in an inhibition of the cycle. Cortico-adrenal extract restored the estrous cycle of adrenalectomized rats in all cases studied. This occurred either at once or after a lag period of a few days. In numerous experiments with theelin and antuitrin 'S,' it was not found possible to restore estrus when the materials were administered after adrenalectomy. When injections were begun before operation, however, the cycle was thereafter well maintained. No specific effect of cortico-adrenal extract on the ovarian cycle of spayed adult female rats was demonstrated."—*C. Landis* (N. Y. Psychiatric Institute).

1562. **Davis, F. C.** Effect of maze rotation upon subjects reporting different methods of learning and retention. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 47-64.—The subjects who took part in this experiment, uninstructed as to the method of learning and of retaining the high-relief finger maze which was presented to them, spontaneously adopted divergent methods, described as (1) kinesthetic-tactual, (2) kinesthetic-tactual-nonserial verbal, (3) visual (non-serial) verbal, (4) serial-verbal, (5) visual-image. The subjects who reported either a dominantly visual-image method or a serial-verbal method required fewer trials to learn the maze than subjects reporting kinesthetic-tactual cues as dominant in the learning of the maze in its original position. When the maze was rotated 180°, and the subjects so informed, following four successive errorless tracings of the maze in its original position, the visual-image and the serial-verbal subjects were differentiated from the others in that: (1) they required fewer trials to learn the rotated maze; (2) they were nearer mastery following their first errorless tracing of the rotated maze; (3) their errors were qualitatively as well as quantitatively distinguishable from those made by the dominantly kinesthetic-tactual subjects.—*E. H. Kemp* (Clark).

1563. **Ey, H.** La notion de constitution (essai-critique). (The concept of constitution, critical essay.) *Evolution psychiat.*, 2nd ser., 1932, No. 4, 25-54.—The author shows that the hypothesis of

constitutions, in so far as it derives psychological characters from purely hereditary or organic factors, misrepresents all motor action of the environment and encloses the total personality within the limits of strictly hereditary or organic variation. The author, on the other hand, starts with the hypothesis that psychological constitution and temperament depend essentially on one's bio-physio-morphological make-up and varies with it as well as with mentality. Psychological constitution depends upon social factors and varies with them. It is a sum of characters which expresses individuality.—*M. H. Piéron* (Sorbonne).

1564. **French, T. M.** Interrelations between psychoanalysis and the experimental work of Pavlov. *Amer. J. Psychiat.*, 1933, 12, 1165-1203.—The author compares the two seemingly different disciplines, and draws parallelisms between various of Pavlov's studies and concepts and the phenomena and doctrines of the psychoanalysts.—*N. Goldman* (Boston Psychopathic Hospital).

1565. **Froment, J., & Mayoud, R.** La déviation de l'index dans l'expérience de la déviation dite spontanée dépend de réflexes statiques cérébraux de type conditionnel, non moins que des réflexivités cérébelleuses et labyrinthiques. (The deviation of the index finger in the experiment of so-called spontaneous deviation depends upon cerebral static reflexes not less than upon cerebellar and labyrinthine reflex activities.) *Rev. neur.*, 1933, 40, No. 2, 210-214.—The author presents the results of an extended investigation, which show the importance of cerebral factors in explaining many of the variations observed in normal subjects as well as in those suffering from affections of the vestibule and the cerebellum.—*M. H. Piéron* (Sorbonne).

1566. **Giese, F.** Treball i fatiga. (Work and fatigue.) *Rev. de psicol. i ped.*, 1933, 1, 305-321.—Giese discusses the causes of fatigue in office work and its prevention by psychotechnical organization. He gives two illustrative cases of the value of the industrial psychologist in avoiding excess of fatigue and increasing output. He also describes a new technique for demonstrating differences of fatigue according to differences in the mode of working.—*M. E. Morse* (Catonsville, Md.).

1567. **Ingle, D. J.** Adrenal insufficiency and capacity for sustained work output. *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 163-165.—The author used adrenalectomized rats with the object of evaluating work capacity as a criterion of adrenal cortex insufficiency. Contraction of the gastrocnemius muscle loaded with 100 grams was the work involved. Normal animals worked continuously for from 5 to 11 days. For adrenalectomized animals "fatigue" took place in an average time of 15 hours, and death approximately 2 hours later. Small doses of an adrenal cortex extract were effective in prolonging the survival period, increasing the amount of work done, and bringing about temporary recovery from complete "fatigue." Large doses increased the period of muscular contraction from 15 hours to 145 hours. Transplants of the adrenals to ovaries in

females and to the spleen in males enabled the animals to work normally. Histological examination revealed normal cortex tissue and indications that the medulla had degenerated. It is probable that nervous innervation is not necessary for normal secretory activity of the cortex.—*P. Seckler (Radcliffe)*.

1568. Jacobson, E. Electrical measurements concerning muscular contraction (tonus) and the cultivation of relaxation in man. Studies on arm flexors. *Amer. J. Physiol.*, 1934, 107, 230-248.—"Apparatus and procedure are described which make it possible to measure practically all degrees of muscular contraction in electrical terms. To effect this, transient potential differences (action-potentials) are recorded to fractions of a microvolt. Degrees and variations of muscular contraction over a prolonged period can be represented in graphic form while the mean value during the period can be expressed as a certain number of microvolts. Apparently healthy persons (college students) attempting to relax completely, commonly fail to do so to some extent. From time to time their arm muscles contract, at least slightly. Certain patients suffering from 'nervous' disorder, vascular hypertension, or chronic colitis characteristically yield records showing marked inability or failure to relax. Measurements made on these individuals before and after training show that relaxation can be cultivated. After training, they relax more fully, as a group, than do the untrained college students. The results of daily rests alone, without training, remain to be determined. Low microvoltage is found after training to relax, even if no test has been made previously. Therefore repetition of tests evidently is not the cause of the progressive decrease in microvoltage generally observed during training to relax. Some of the untrained subjects with disorders mentioned show hypertension in some records but fair relaxation in others. They vary considerably until they are trained to relax more nearly habitually."—*C. Landis (N. Y. Psychiatric Institute)*.

1569. Klestadt, W., & Lill, L. Studie zur Augenreaktion während der Drehung. (Study of eye reactions during rotation.) *Acta oto-laryngol.*, 1933, 19, 225-231.—The subjects were rotated in a dark room. Part of the time they were given a mirror to observe their eye movements.—*M. B. Mitchell (New Hampshire State Hospital)*.

1570. Koster, H., & Mirsky, A. I. Inhibition of hypoglycemic perspiration by spinal anesthesia. *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 135-138.—To test the hypothesis that profuse perspiration, observed as an early and prominent symptom of a marked fall in blood sugar in experimentally induced hypoglycemia, is produced by a mechanism which excites the sympathetico-adrenal mechanism, the authors attempted to inhibit the sympathetic nervous system, employing spinal anesthesia for the purpose. Observations indicated that the sympathetic system plays a definite role in the insulin hypoglycemic syndrome. Two possible mechanisms are discussed, the first in which the sympathetic system acts as a conveyor of stimulation to the adrenals, and the

second, a primary direct stimulation of the adrenals by the low blood sugar.—*P. Seckler (Radcliffe)*.

1571. Langhorne, M. C. Age and sex differences in the acquisition of one type of skilled movement. *J. Exper. Educ.*, 1933, 2, 101-108.—The purpose of this study was to determine the influence of the age and sex of the learner on the learning of the operation of a pursuitmeter. An analysis of the findings leads to the following conclusions: (1) Rates and limits of improvement from practice increase with an increase in chronological age. (2) The period of greatest improvement appears during, or near the beginning of, the adolescent period. (3) The subjects seemed to fall into age groups, separated from each other by different intervals. (4) An increase in age does not bring a conflict between the various manipulatory responses involved in the acquisition of this skill. This lack of inhibition, together with the growth of brain structure, implies that skills of this type should be taught at certain specified ages. (5) The order of the individuation of the movements through practice proceeded from the trunk, shoulder, and arm toward the finger. (6) Boys learned to manipulate the machine more readily than did girls.—*H. W. Karn (Clark)*.

1572. Laugier, H., & Néoussikine, B. Influence de la circulation sur les modifications tardives de la chronaxie après un travail électriquement provoqué. (The influence of the circulation upon the delayed modifications of chronaxy after electrically aroused work.) *C. r. Soc. biol.*, 1933, 113, 1138-1141.—Following electrically aroused work there is a change in the chronaxy of the flexors and extensors of the fingers, the change (augmentation) commencing after the cessation of the muscular activity. The whole of the experiments show that the delayed augmentation of chronaxy is closely tied up with the vascular state of the muscle and with chemical processes which develop in the muscle during the periods of activity and recuperation.—*M. H. Piéron (Sorbonne)*.

1573. Laugier, H., Toulouse, E., & Weinberg, D. La biotypologie et l'orientation professionnelle. (Biotypology and vocational guidance.) *Biotypol.*, 1933, 1, 27-35.—A description of a complete biotypological examination standardized on school children of Paris. It is proposed to make with the test a veritable biological card of identity to which one can refer whenever a decision must be made concerning the individual, professional, familial, and social activities of the subject. An appendix gives the standardized biotypological card.—*M. H. Piéron (Sorbonne)*.

1574. Lauterbach, C. E. The measurement of handedness. *J. Genet. Psychol.*, 1933, 43, 207-212.—Handedness cannot be satisfactorily measured by a single performance: what is needed is a cross-section of an individual's manual activities. A habit scale for handedness is offered, consisting of 50 items to be rated on a scale of 10. When it was applied to 1061 cases, a U-shaped distribution curve resulted,

with much skewness toward right-handedness.—J. F. Dashiell (North Carolina).

1575. Leulier, A., Bernard, A., & Richard, A. **Potassium et chronaxie dans la dégénérescence musculaire expérimentale.** (Potassium and chronaxy in experimental muscular degeneration.) *C. r. Soc. biol.*, 1932, 110, 848-849.—(*Biol. Abst.* VII: 21085).

1576. Lissner, K. **Die Entspannung von Bedürfnissen durch Ersatzhandlungen. Untersuchungen zur Handlungs- und Affektpsychologie.** XVIII. Herausgegeben von K. Lewin. (The resolution of needs by substitutive acts. Studies of act and affect psychology. XVIII. Edited by K. Lewin.) *Psychol. Forsch.*, 1933, 18, 218-250.—A need to reach a certain goal represents functionally a system in a state of tension with a vector in the direction of the goal. Such a system tends to show changes in the direction of the resolution of its tension. The effect of substitutive acts on the resolution of the tensions was studied. Various problems were given with substitutive solutions, and the value of the substitution for resolving the tension was ascertained. It was found that the resumption of an interrupted task will not occur if the second task is similar to the first. Next to the similarity of the tasks the degree of difficulty is important for the substitution value. The more difficult substitution act has a greater substitution value. The influence of similarity is greater for the substitution value than that of the degree of difficulty. In order that an act have substitution value it is necessary that there be communication between the fundamental (first) system and the substitution system.—J. F. Brown (Kansas).

1577. Margaria, R., Edwards, H. T., & Dill, D. B. **The possible mechanisms of contracting and paying the oxygen debt and the role of lactic acid in muscular contraction.** *Amer. J. Physiol.*, 1933, 106, 689-715.—The role of lactic acid and the paying of the oxygen debt of muscular contraction have been a matter of physiological controversy. The authors give evidence for the validity of the assumption that the lactic acid mechanism could not play any important role in muscular contraction except in very strenuous exercise. The oxygen consumption curve during recovery seems to be the sum of the four functions: (1) previous basal oxygen consumption, (2) slow oxygen consumption attributable to oxidation of lactic acid, (3) fast oxygen consumption, and (4) oxygen consumption decreasing during recovery so very slowly that the process may be present several hours after the end of the work. Of these four functions only (2) and (3) have the meaning of an oxygen debt payment. The fourth has been interpreted as an increase in resting metabolism caused by exercise. The disappearance of lactic acid from the blood at the beginning of recovery after strenuous exercise shows a lag which does not seem to be fully explained either by a lag in the diffusion of lactic acid from muscles to the blood or by a slower oxidation of lactic acid, or by a delayed lactic acid production.—C. Landis (N. Y. Psychiatric Institute).

1578. Miles, W. R. **The maintenance of our mental abilities.** *Scient. Mo.*, 1933, 34, 549-552.—Experimental studies of more than 2000 adults between 20 and 95 years of age show that, through the period of maturity and after, the decrease of manual skill and external activity can be compensated for by the enlargement of one's interests and by improved judgment.—J. F. Dashiell (North Carolina).

1579. Minkowski, E. **La notion de constitution sans valeur théorique et pratique.** (The concept of constitution without theoretical or practical value.) *Evolution psychiat.*, No. 4, 83-89.—M. H. Piéron (Sorbonne).

1580. Porak, R. **Le test de la température en psychophysiologie humaine.** (The temperature test in human psychophysiology.) *Rev. gén. sci.*, 1933, 44, 475-481.—The author considers temperature only as a test for illustrating some psychophysiological observations. In comparing the curves of temperature with the detailed observations furnished by the subjects, the author is forced to admit that muscular contraction itself has a less important effect upon the genesis of heat than the infinitely variable shades of internal feeling, of psychic energy.—M. H. Piéron (Sorbonne).

1581. Schmidt, M. **Körperbautypen-Probleme.** (The body-build type problems.) *Acta Psychiat. et Neur.*, 1933, 8, 389-420.—Based on the author's investigations (Schmidt, *Körperbau und Geisteskrankheit*, Springer, Berlin 1929) and those of others, it is generally conceded that Kretschmer was right in depicting the pyknic type as characteristic of manic-depressive psychosis and the leptosome-dysplastic type as characteristic of schizophrenia. It is pointed out, however, that the Kretschmer types have no biological basis (in spite of claims to the contrary) and that the influence of the milieu is not clear. Certain new measurements and correlations are given and discussed by the author, with reference to C. Burran's works. In the lengthy discussion following the paper, the following participated: Donner, Izkowitz, Reiter, Levison, Evensen, Schou, Sjøbring, and Gjessing.—M. L. Reymert (Mooseheart Laboratory for Child Research).

1582. Shreider, E. **L'école biotypologique italienne.** (The Italian school of biotypology.) *Biotypol.*, 1933, 1, 64-97.—A summary with a bibliography.—M. H. Piéron (Sorbonne).

1583. Sjollesma, B., & Seekles, L. **Die neuromuskuläre Reizbarkeit in Beziehung zur Biochemie der Minerale. I. Der Einfluss einer Änderung des Ca/P-Verhältnisses in der Nahrung.** (Neuromuscular excitability in relation to the biochemistry of minerals. I. The influence of a change of the Ca/P relation in nutrition.) *Biochem. Zsch.*, 1933, 258, 471-479.—(*Biol. Abst.* VII: 21074).

1584. Soler-Dopff, C., & Alier, J. J. **Consideraciones sobre l'estudi dinamogràfic del treball muscular.** (Considerations on the dynamographic study of muscular work.) *Rev. de psicol. i ped.*, 1933, 1, 252-270.—Motion studies by the authors show that the muscle groups most concerned in heavy manual work

are the extensors of the trunk and the flexors of the hands and forearms. Analysis of the contraction curves of these groups, made with the Cardenal-Soler chronodynamograph, proves that a given form of curve is characteristic for the various groups of each subject. All the curves rise quickly to the maximum, but the form of the decline, i.e. of the onset of fatigue, varies and is determined by metabolic and neuro-psychic factors. The curves fall into three groups: a rapid smooth decline (vegetative aspect of fatigue); maintenance of the initial force, followed by a vertical drop (predominance of psychic factors); secondary contractions during the descent (discord between the volitional and physicochemical factors).—*M. E. Morse* (Catonsville, Md.)

1585. Stimpel, E. *Der Wurf*. (Throwing.) *Neue Psychol. Stud.*, 1933, 9, 109-138.—The examination of the activity of throwing toward a goal showed a greater exactness of the whole than of the parts. Intensity and angle of throwing were determined for trained and untrained persons. There is a correlation between intensity and angle of throwing which is an important factor in the structure of these specific motor Gestalts. To this factor is due the great exactness of the whole, which would not be possible by mechanical interaction of the parts.—*O. Klemm* (Leipzig).

1586. Vernon, H. M., & Warner, C. G. The influence of the humidity of the air on capacity for work at high temperatures. *J. Hygiene*, 1932, 32, 431-462.—(*Biol. Abst.* VII: 21053).

1587. Webster, J. *Stellreflexen. Statische Reflexen. Stehreflexen*. (Position reflexes. Static reflexes. Postural reflexes.) *Tijdsch. Diergeneesk.*, 1933, 60, 226-233.—The author studied more closely the postural reflexes that play a part in standing, getting up, lying down, etc., and that are influenced by the position of the head with regard to the neck (neck-position reflexes) and by the position of the head with regard to the labyrinthine reflexes. He concludes that they are of great importance in diagnosis of nervous diseases, and that they are also unconsciously used in veterinary practice to serve several purposes, e.g., in causing animals to lie down.—(*Biol. Abst.* VII: 21080).

1588. Wigert, V. *Versuche zur anthropometrischen Bestimmung der Körperbautypen*. (Experiments to determine anthropometrically the types of bodily build.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1933, 143, 651-700.—Conclusions are based upon studies of 119 men and 122 women. The correlation between anthropometric types and Kretschmer's types is high, except for athletics. In both men and women, there is an affinity between leptiforms or lepto-athletiforms and schizoid temperament. No such relationship can be made out between the pyknic build and the manic-depressive diagnosis.—*C. W. Fox* (Rochester).

1589. Wilson, F. N., Macleod, A. G., & Barker, P. S. The distribution of the currents of action and of injury displayed by heart muscle and other excitable tissues. *Ann Arbor: Univ. of Michigan Press*, 1933. Pp. vii + 59 + ix.—A discussion, in mono-

graph form, of work which has earlier been reported in condensed form (*J. Gen. Physiol.*, 1933, 16, 423). Greater space is given to derivation of equations and theoretical discussion.—*C. H. Graham* (Clark).

[See also abstracts 1469, 1470, 1488, 1523, 1542, 1546, 1551, 1552, 1554, 1593, 1597, 1609, 1622, 1639, 1696, 1799, 1864, 1865, 1885.]

PLANT AND ANIMAL BEHAVIOR

1590. [Anon.] *Innervation of skin of frog*. *Nature*, 1933, 132, 715.—A short note on the statement of Mlle. J. Ackerman that the skin of the frog *Rana esculenta* is innervated by a nerve-net consisting of two plexuses.—*E. H. Kemp* (Clark).

1591. Binet, L. *Scènes de la vie animale*. (Scenes from animal life.) Paris: Gallimard, 1933. Pp. 155. Fr. 12.—The author presents 19 short studies, each with a short bibliography: animal dances, nuptial offerings, luminous animals, the nuptial chamber, the social assistant ant, nuptial dramas, physiologists and the oyster, the eye and sexuality, the effect of tobacco, pigeon milk, longevity, sexual inversion, aquarium lovers, sex appeal, nuptial rides and rings, etc.—*M. H. Piéron* (Sorbonne).

1592. Bott, H. M. *Method in social studies of young children*. Toronto: Univ. of Toronto Press, 1933. Pp. 110. \$1.25.—This analysis was conducted by the students of St. George's School in connection with an observational study made in the school. All known group studies of preschool children are included, with attention centered upon those with social aspects. All employ observational technique and the cross-sectional method. Points compared are: selection of categories; quantitative measures; devices for recording; methods of measuring reliability; methods of expressing results. These conclusions are drawn: over-refinement of categories is a mistake; the time-frequency method, with a 5-second time unit, is desirable; the comparison of direct with indirect observations is one of the best measures of consistency in this sort of investigation; factors of reliability in order of importance are validity, constancy of data, and reliability of observer. There is evident a need for adoption of uniform procedures, and for distinguishing fundamental problems.—*M. P. Montgomery* (Faribault, Minn.)

1593. Coghill, G. E. *Correlated anatomical and physiological studies of the growth of the nervous system of Amphibia. XI. The proliferation of cells in the spinal cord as a factor in the individuation of reflexes of the hind leg of *Amblystoma punctatum** Cope. *J. Comp. Neur.*, 1933, 57, 327-358.—This is a study of the emergence of partial action patterns within the more primitive total action pattern, a process heretofore named "individuation." It deals with the proliferation of spinal cells in segments 10 to 20, inclusive, and represents ten stages of motor development, beginning with the initial swimming response and terminating with the establishment of reflex action in the hind leg. Proliferation of cells is expressed in terms of mitosis and numerical cell

increase. The author finds that mitotic figures occur in nests which really are centers of acceleration. Proliferation appears to progress in cephalocaudal waves which are expressions of intrinsic dynamics of the cord, subject, possibly, to secondary influences from the peripheral sensory nerves. The primary activation of proliferation cannot be ascribed to the afferent nerves of the corresponding regions, because there is no definite or consistent relation between these foci of acceleration and the roots of the nerves. In the stages of development herein described, mitotic figures are found chiefly in the lateral and dorsal faces of the central canal and only rarely in the ventral parts of the cord, where, during the latter stages of *Amblystoma* development herein described, a great increase in mass occurs. The latter will be discussed in forthcoming papers.—C. P. Stone (Stanford).

1594. Davis, F. C. The measurement of aggressive behavior in laboratory rats. *J. Genet. Psychol.*, 1933, 43, 213-217.—White rats that had shown no aggressiveness under group-life conditions, after isolation, one to a cage, showed none toward intruder rats as long as feedings occurred every twenty-four hours; but with forty-eight hour feedings they showed definite persistent aggressiveness toward the intruders. A rating scale of aggressive behavior toward other rats is offered, and it is contrasted with well-known scales of "wildness," etc., manifested toward the experimenter.—J. F. Dashiell (North Carolina).

1595. Delmas-Marsalet, P. Etude sur les connexions anatomiques du lobe frontal chez le chien. (A study of the anatomical connections of the frontal lobe of the dog.) *C. r. Soc. biol.*, 1932, 111, 795-796.—M. H. Piéron (Sorbonne).

1596. De Montpelier, G. An experiment on the order of elimination of blind alleys in maze learning. *J. Genet. Psychol.*, 1933, 43, 123-139.—Blind rats learning several variations of an enclosed maze of diamond-shaped units showed elimination of blind-ally errors in the order: first, those in the middle of the maze, next, those nearest the goal, last, those nearest the entrance. Human subjects learning relief finger mazes of similar patterns showed, on the contrary, elimination in the order: last units, first units, middle units. After the rats had learned their mazes, the habits were allowed to disintegrate by a 2-hour postponement of feeding after the maze had been run each day; and the reappearance of the blind-ally errors began with those nearest the exit. Other rats trained on elevated multiple-T mazes showed a very definite order of elimination from the last to the first.—J. F. Dashiell (North Carolina).

1597. Fischel, W. Über die Bedeutung des Strebens bei tierischen Wahlhandlungen. (Concerning the significance of effort in the choice reactions of animals.) *Zsch. f. vergl. Physiol.*, 1932, 16, 48-75.—To determine the factors that condition an animal's choice when it is free to express a preference, one monkey (*Cercopithecus pygerythrus* Cu.) was tested under the following conditions: A peanut and a piece of biscuit were placed outside the cage, but just within reaching distance. The peanut was invariably chosen,

and the monkey persisted in this preference even when forced to reach past the biscuit to obtain the peanut. When the peanut could be secured only by means of a tool (rake) and the biscuit was placed within reaching distance, the preference was reversed and the biscuit became first choice. When the securing of either incentive required the use of the tool, the preference reverted to the peanut. When the peanut and biscuit were placed on cardboard slides which could be pulled in by means of attached strings, the preference was for the peanut even when its slide was heavily weighted and required extra work. Finally the monkey was presented with a situation in which both peanut and biscuit were visible but could be obtained only by dislodging them so that they fell into a compartment in which they were hidden from view. The animal soon learned to secure the food in this indirect manner. When a choice was required, the animal would knock down the peanut and eat it before turning its efforts toward obtaining the biscuit. The author believes he has demonstrated that a monkey's choice is a function of required activity,—not because effort is involved, but because the situation is complicated—as well as of the nature of the incentive. The latter factor is the sole influence in the case of choices made by the goat. Hence the choices of the monkey are influenced by the future of its acts, even though he cannot know how the consequences are brought about, as well as by the satisfaction of the goal which is to be experienced.—N. R. F. Maier (Michigan).

1598. Hain, A. M. Developmental anomalies in the Wistar albino rat (Edinburgh stock). *Nature*, 1933, 132, 711.—In one line of this stock several cases of microphthalmia have been encountered. Distribution of the abnormality indicates that the character is genetic and recessive. In families related to these, other peculiarities, such as cryptorchidism in males and rudimentary male external genitalia in some females, have been found. These various abnormal conditions are regarded as instances of the polymorphic expression of the same genetic character.—E. H. Kemp (Clark).

1599. Hartman, C. G., & Straus, W. J., Jr. The anatomy of the rhesus monkey. Baltimore: Williams & Wilkins, 1933. Pp. 336. \$6.00.—R. R. Willoughby (Clark).

1600. Hatai, S., Kokubo, S., & Abe, N. The earth currents in relation to the responses of catfish. *Proc. Imp. Acad., Tokyo*, 1932, 8, 478-481.—As catfish, for several hours before an earthquake (but not at other times), respond to a slight jar by a characteristic motion of the body if the water in their aquarium is continuous with the earth through inflow and outflow, the authors attempted to determine what stimulus there is, before an earthquake, that can account for this behavior. Because of the known sensitivity of the fish to minute electrical currents, and the need for connection with earth, it was suspected that electrical currents in the earth might be responsible. Electrodes were placed in the aquarium and in the main reservoir (63 m. away), or in the earth near

these; variations in the potential recorded were closely correlated with (1) sensitivity or non-sensitivity of the catfish, and (2) occurrence of earthquakes. Slow rises or falls, or sinuous variation of p. d., did not denote the coming occurrence of a quake, nor were they correlated with sensitivity of the fish; nor is a sudden rise and sudden fall, occurring singly or in succession during a slow undulatory variation of earth current, of any significance; nor is an abrupt rise (or fall) followed by stability at high (or low) for some time (often several hours); it is only one type of variation—a single sudden change (rise or fall) in potential, followed by an immediate return to former level while the general course of earth current remains steady—which presages an earthquake and causes a sensitive state in the fish.—(*Biol. Abst.* VII: 21044).

1601. Hemmingsen, A. M. Mating instincts in spayed rats with transplanted ovaries. *Skand. Arch. f. Physiol.*, 1931, 63, 87.—All degrees of sexual excitement were observed in ovariectomized rats with transplanted ovaries.—D. J. Ingle (Minnesota).

1602. Herter, K. Beiträge zur Zentrenfunktion zehnfussiger Krebse. (Contributions to the function of centers in decapod crabs.) *Zsch. f. vergl. Physiol.*, 1932, 17, 209-266.—A continuation of the neurophysiological investigations of Bethe and of Jordan. Cinematographic and other records were taken on resting and moving crabs under various experimental conditions. The cutting of one oesophageal connective caused strong flexion of walking legs on that side, and extension of those on the intact side. The action of the swimmerets was affected in the reverse manner, those on the operated side extending and striking with greater amplitude than before. Peripheral stimulation or faradic stimulation of both exposed cerebral ganglia produced about the same effects in the cases of pincers and walking legs, but affected action of the swimmerets in diametrically the opposite manner. Faradic impulses generally produced different effects according to their strength. For example, applied to both cerebral ganglia, weak faradic stimuli caused pincers and walking legs to flex, strong and medium strength stimuli flexed these extremities; whereas weak stimuli so applied caused swimmerets to extend, medium strength stimuli flexed them, and strong stimuli again caused extension. The results warrant certain anatomical and physiological assumptions, on the basis of which a schematized theoretical explanation is offered.—T. C. Schneirla (New York University).

1603. Hoagland, H. Electrical responses from the lateral-line nerves of fishes. IV. The repetitive discharge. *J. Gen. Physiol.*, 1933, 17, 195-209.—Broken ends of the lateral lines may be the source of a repetitive discharge. In trout the injury discharge may mask the normal end-organ effect. The injury effect ceases in from 10 to 15 minutes, while in trout the end-organ discharge may continue for an hour. The receptor discharge, the injury discharge, or the summed discharges frequently become synchronized. Impulses from tactile receptors must arise in definite

intervals during the synchronous discharge in order to be conducted.—C. H. Graham (Clark).

1604. Janzen, W. Untersuchungen über Grosshirnfunktionen des Goldfisches (*Carassius auratus*). (Investigations on cerebral functions of the goldfish.) *Zool. Jahrb., Abt. allg. Zool. u. Physiol. der Tiere*, 1933, 52, 591-628.—The cerebral functions of the goldfish were examined on the basis of changes after uni- or bilateral extirpation of the cerebrum. The reflex processes, such as posture, locomotion, and food intake did not change. The writer distinguishes between initiative and spontaneity. Initiative is the non-reflex, active motor response to an environmental stimulus. Spontaneity is the ability to initiate change or stop movement without any external stimulation. The decerebrated fishes lose initiative almost completely, while spontaneity shows very few changes. Decerebrated fishes learn like intact fishes to distinguish between colors. In general it was shown that the main difference between decerebrated and intact fishes consisted in the fact that the behavior of the former was more uniform and that they reacted to the different stimuli in a more unconditioned manner.—W. Janzen (Marburg).

1605. Jasper, H., & Bonvallet, M. La subordination chez le rat spinal. (Subordination in the spinal rat.) *C. r. Soc. biol.*, 1933, 113, 1186-1188.—These experiments show that in mammals the presence of the superior centers is not necessary to maintain the motor nerves in a condition of subordination. In so far as there is central nervous tissue where the function of the afferent and efferent fibers may be established with the possibility of a reflex arc, it seems that there exists in this nervous tissue the potentiality of producing the phenomena of subordination.—M. H. Piéron (Sorbonne).

1606. Koehler, O. Die Orientierung von Pflanze und Tier im Raume. II. Zoologischer Teil. (Orientation of plants and animals in space. II. Zoological section.) *Biol. Zentbl.*, 1931, 51, 36-58.—(*Biol. Abst.* VII: 21045).

1607. Kuroda, R. Studies on visual discrimination in the tortoise *Clemmys japonica*. *Acta Psychol. Keijo*, 1933, 2, 31-59.—9 tortoises were used and trained to differentiate between two stimuli visually presented in a discrimination apparatus. The author found that it is possible to train them to discriminate among a number of colors, shades and geometrical figures. Thus red is readily differentiated from blue, green, yellow, orange-yellow, orange and even orange-red; likewise blue from red, orange, green and even blue-green. Differentiation of shade, as e.g. black from medium gray and the latter from light gray, as well as that of size of visual things were proved also to be possible but a little more difficult for the animals than that of colors. Geometrical figures are discriminated in different ways according to the combinations of stimuli. Figures of diverse quality, such as a filled figure and an unfilled one, are more easily discriminated than figures of the same quality. A circle, triangle and square are distinguished from each other. A square rotated 90° as well as a triangle with

apex down are recognized as different from a square laid horizontally and a triangle with apex up. Transfer of training was found possible from the acquisition of the discrimination habit between black filled figures on white field to white figures of the same kind on black field. It is thus assumed that the animals can discriminate geometrical figures as such, or in terms of an absolute sense, which signifies that the differentiation is made with respect to their pure quality apart from their size, shade, direction or ground. Relational judgment, as was advocated by the Gestalt theory with regard to discrimination of visual stimuli simultaneously presented to animals, was not true in the present investigation. Formation of a visual discrimination habit seems, instead, to rest on the basis of thorough penetration into the absolute quality of the positive stimulus concerned. This penetration gives the animals a cue for deciding whether it is to be taken or be rejected when they are subjected to differentiation. Two figures, 16 tables and 26 references are given.—R. Kuroda (Keijo).

1608. Kuroda, R. Some observations on a Korean frog *Cacopoides tornieri* (Vogt). *Acta Psychol. Keijo*, 1933, 2, 61-64.—The frog lives the greater part of its life under the ground and comes out of it at the time of mating. It shows a strong tendency toward negative phototaxis. If it is taken into a vessel filled with mud, it begins at once to crawl under the earth. But digging a hole takes place not with its frontal part of the body but with its hind limbs and sacral region, the fore limbs being used only as a fulcrum. The response to mechanical stimuli is peculiar, particularly when it is hindered from its progression or flight, being usually attended by secretion of yellowish viscous and probably poisonous fluid from dermal glands. The essential characteristic of the response to mechanical excitation is that the part stimulated protrudes itself as if to resist or to thrust aside the stimulus. An exception from this rule is found in the case of the four limbs. Here retraction occurs when stimulated. In the rainy season of early summer its subterranean abode is filled with water, and difficulty in respiration resulting therefrom compels it to get out of the abode and seek its mate. 8 figures are given.—R. Kuroda (Keijo).

1609. Liang, B. T. The effect of gonadectomy and testicular transplantations on habit formation and retention in the white rat. *J. Genet. Psychol.*, 1933, 43, 140-162.—With the circular maze were compared the learning rates of three groups of male rats: 12 castrated, 17 with autotransplantation of testes, and 10 normal. In the course of the learning the inferiority to the normal of the transplanted and more especially of the castrated group was increasingly shown by a greater number of errors committed and by a greater consumption of time, but not by any difference of speed. Upon relearning the same maze after an interval of twenty days, the castrates and transplants showed somewhat better retention but poorer relearning rate than did the controls. With the same maze 8 ovariectomized and 8 control females were tested for learning and relearning; but no sig-

nificant differences appeared in either case. Microscopic examination failed to reveal any correlation of histological differences and weights of grafts with learning ranks.—J. F. Dashiell (North Carolina).

1610. Lincoln, F. C. A decade of bird-banding in America: a review. *Smithsonian Inst. Rept.* (for 1932), 1933, 327-351.—A review of bird banding work initiated and centralized by the U. S. Biological Survey during the past ten years. This work has contributed to our knowledge of bird migration, local movements of birds, nesting activities, spread of introduced species, and long range flights.—C. M. Louttit (Indiana).

1611. Matthes, E. Geruchsdressuren an Meer-schweinchen. (Olfactory discrimination experiments on guinea pigs.) *Zsch. f. vergl. Physiol.*, 1932, 16, 766-788.—Guinea pigs learn to avoid food treated with arsenic, and by adding an odorous substance to the poisoned food the avoidance reaction became associated with this substance. Using two dishes of oat mush, one poisoned with arsenic and given an odor of bromstyrol and the other used as control, a guinea pig was trained to detect bromstyrol in quantities as small as 1 : 500,000. Another animal was trained to detect nitrobenzene in quantities less than 1 : 100,000. When the limen for a particular substance was approached, the animals were observed to sniff carefully at both dishes before eating from either. A third guinea pig learned to discriminate between nitrobenzene and bromstyrol, the former accompanied by arsenic. Later the arsenic was placed with the bromstyrol, and the animal ate from this dish for a time before it learned the transfer. With the two types of food in the halves of the same dish, only the good food was consumed, but when they were similarly placed on cabbage leaves the animal ate of both. Apparently the discrimination is not readily transferred to different situations.—N. R. F. Maier (Michigan).

1612. McIndoo, N. E. Olfactory responses of blowflies, with and without antennae, in a wooden olfactometer. *J. Agri. Res.*, 1933, 46, 607-625.—The olfactory responses of three species of blowflies were studied in a specially constructed olfactometer, which is described in extenso. No differences were found between males and females. Stimuli employed included fermenting sugar solution, milk and milk constituents, and putrid meat. "Fermented casein and baker's yeast were among the best attractants found, but putrid meat and putrid eggs were the most attractive." Operative experiments demonstrated that the antennae of blowflies do not bear the olfactory organs.—C. M. Louttit (Indiana).

1613. Neet, C. C. Visual pattern discrimination in the *Macacus rhesus* monkey. *J. Genet. Psychol.*, 1933, 43, 163-196.—The four monkeys used learned to discriminate between a black equilateral triangle appearing in a white square background and a circle of the same area, brightness, and background. When the backgrounds were systematically altered or the forms changed in position, the discrimination for one animal was undisturbed throughout, and for the

other three disturbed only in the earliest trials. When the forms themselves were systematically altered all animals responded correctly to the negative forms and, in varying degrees, to the positive forms. It is held that background (a Gestalt characteristic) is not an essential part of the stimulus. When the positive form was modified and mutilated systematically one animal demonstrated capacity to react to triangularity per se. It is held that this type of behavior may be evidence of some symbolic process, though not necessarily so. By reductions of size of the stimulus objects certain crude thresholds for form and area were determined, the smallest being 0.1083 square inch. In general, the conclusion follows that the animal has a highly developed optical mechanism.—*J. F. Dashiell* (North Carolina).

1614. Peterson, A., & Haeussler, G. J. Response of the oriental peach moth and codling moth to colored lights. *Ann. Ent. Soc. Amer.*, 1928, 21, 353-379.—Report on a series of experiments with lights transmitted through colored screens, at temperatures between 70 and 75° F., using newly emerged moths of *Laspeyresia molesta* and *L. pomonella* (from 60 to 75 of each sex in each test). Two types of apparatus were used, one with 8 lighted compartments and the other with 4. When the light intensities varied, more moths went to low intensity at right angles to high intensity than when opposite it. In both species if moths are given a choice of lights varying from red to violet and ratios of relative intensities of the colored lights are approximately equal, practically all of the moths will go to the blue and violet colored lights; few or no adults are attracted by red light. Orange and yellow are also unattractive when compared with blue. Green light possessing no blue rays is also unattractive. Violet is preferred to blue, and purple ultra lights appear to be more attractive than violet. It is probable that ultra-violet is seen by the oriental peach moths (*L. molesta*) and that they are attracted by it. Codling moths appear to be somewhat more positively phototropic to blue and violet lights than oriental peach moths. The responses of males and females of both species seem to be similar. Electric light traps, using ordinary white or artificial daylight, in a peach orchard have proved of little or no value in controlling the oriental peach moth.—(*Biol. Abst.* VII: 21046).

1615. Picard, Fr. Les phénomènes sociaux chez les animaux. (Social phenomena in animals.) Paris: Colin, 1933. Pp. 201. Fr. 50.—This book contains ten chapters, of which the first two consider non-social life. The final chapter is devoted to human society, the others dealing with different social types and their classification.—*M. H. Piéron* (Sorbonne).

1616. Piel, O. Recherches biologiques sur les hyménoptères du bas Yang-Tsé (Chine). (Biological investigations of the hymenoptera of the lower Yangtse [China].) *Ann. Soc. entom. de France*, 1933, 102, 109-154.—The study concerns particularly *Sphex isodontia nigellus* F. Smith. After describing his methods, the author presents his observations on nest-building, hunting, paralysis of prey, the role of

the senses and of memory in choice, the making and recognition of the nest, the reactions of the nesting instinct in the presence of danger or of unknown changes. The great plasticity of instinct is emphasized. All individuals of the species know how to choose and arrange nesting material. All nests appear alike, but detailed examination shows that all are different. Similar comments are made on the instincts of hunting, paralyzing, and mutilating. The latter instinct has been added to that of paralyzing, for which it is the occasional complement and, exceptionally, the substitute. A bibliography of 50 titles.—*M. H. Piéron* (Sorbonne).

1617. Piéron, H. Notes éthologiques sur les Gastéropodes perceurs et leur comportement avec utilisation de méthodes statistiques. (Ethological notes on the gastropod borers and their behavior, utilizing statistical methods.) *Arch. zool. exper. et gén.*, 1933, 75, 1-20.—Between the theory of Fischer, who declares that each carnivore chooses a victim appropriate to its own size, strength and appetite, instinct urging the carnivore to choose a place which corresponds either to the adductor muscle or to the viscera of the prey, and the theory of Pelseener, who believes that the borer searches for a place corresponding to the genital glands, the author has sought to obtain from numerous documents an account of the instinctive processes which guide the borer of shells. The results indicate that the borer avoids the region of the siphon. In general small borers prefer small victims, and large borers seek large shells, always eliminating those that are too thick. So one finds the large *Mastra stultorum* attacked, although the large but smaller *Donax* are not because of the thickness of the shell. The author's conclusions are based upon correlations.—*M. H. Piéron* (Sorbonne).

1618. Rabaud, E. L'instinct maternel des araignées. Le rapt du sac ovigère. (The maternal instinct of spiders. The seizure of the egg sac.) *Bull. Soc. zool.*, 1932, 57, 238-262.—A female spider deprived of her sac takes any other sac near at hand. The author attempted to determine what the female would do in the presence of another female who held her egg-sac suspended from her spinnerets. The attachment of the sac to the spinnerets does not lessen its attraction to the female who entirely lacks a sac.—*M. H. Piéron* (Sorbonne).

1619. Regnart, H. C. The lower limits of perception of electrical currents by fish. *J. Marine Biol. Assn., United Kingdom*, 1931, 17, 415-420.—Under favorable conditions, including freedom from vibrations, freely swimming fish were extremely sensitive to weak electric currents. Definite responses were noted in fields of 2 microamps. per sq. cm. By suitable experiments it was shown that the lateral sense organs are partly involved in perception and may function for directional purposes; this is of interest in considering the suggestion of Thornton that the specialized lateral organs of deep sea fish may have an additional electrical function.—(*Biol. Abst.* VII: 21048).

1620. Rochon-Duvigneaud, A. *Esquisse d'une ophthalmologie comparée des vertébrés*. (An outline of a comparative ophthalmology of vertebrates.) *Ann. d'ocul.*, 1933, 170, 1-42.—The author shows that in the animal series the eye very quickly becomes an excellent tool; but the eye is not all. Man sees with the same eyes as the apes, but he manipulates the visual facts with a very different brain. The eye of the gorilla is better than that of man, but the difference in brains results in the absence of a common measure for the difference between intellects.—M. H. Piéron (Sorbonne).
1621. Rochon-Duvigneaud, A. *Le caméléon et son oeil*. (The chameleon and its eye.) *Ann. d'ocul.*, 1933, 170, 177-218.—M. H. Piéron (Sorbonne).
1622. Rundquist, E. A., & Bellis, C. J. Respiratory metabolism of active and inactive rats. *Amer. J. Physiol.*, 1933, 106, 670-675.—"Basal metabolic rates were determined on relatively homogeneous groups of active and inactive rats from the fifteenth generation of strains selected on the basis of spontaneous activity. The basal metabolic rates of the active animals were higher, while there were no significant differences in age, weight, or respiratory quotient. Successive determinations on a few animals of each group revealed that the basal metabolism drops markedly in a period of about three weeks. At all times, however, the rates of the active animals were higher. Daily determinations for two active and two inactive male rats over a two weeks' period indicated that the basal metabolic rate is a fairly constant figure while the respiratory quotient is highly variable. While there is a marked sex difference in activity, no such difference was found in basal metabolic rates."—C. Landis (N. Y. Psychiatric Institute).
1623. Schlüter, E. *Die Bedeutung des Centralnervensystems von Hirudo medicinalis für Lokomotion und Raumorientierung*. (The significance of the central nervous system of *Hirudo medicinalis* for locomotion and spatial orientation.) *Zsch. f. wiss. Zool.*, 1933, 143, 538.—After the extirpation of both the superior pharyngeal ganglia, which have an inhibitory function, one observes an acceleration of all bodily movements. After extirpation of the inferior pharyngeal ganglion the animal does not make movements of walking and seeking spontaneously or as a result of moderate stimulation. After unilateral decerebration a curvature of the body in the resting position and a deviation towards the intact side were observed in swimming and crawling. After unilateral disruption of the pharyngeal connections crawling and swimming were not altered. After interruption of the connections between the superior pharyngeal ganglia the movements of crawling, swimming, and turning were disturbed. Division of the abdominal cord interrupted the coordination of the movements; the posterior part of the animal more often showed swimming movements than did the anterior part. Extirpation of the anal ganglion caused complete inability to swim; after additional extirpation of the superior pharyngeal ganglia the ability to swim was regained. Extirpation of one eye did not cause asymmetry of behavior. A sensitivity to gravitation was found, which was not a function of a definite sensory organ.—E. Schlüter (Dannenfeld i. d. Altmark).
1624. Steinegger, W. *Untersuchungen über die Tätigkeit des Zentralnervensystems des grosshirnlosen Frosches bei Sauerstoffgegenwart und Sauerstoffmangel, zugleich ein Beitrag zum Unterschied von natürlichen und künstlichen Reizen*. (Investigations of the activity of the central nervous system of the decerebrate frog in the presence and absence of acid, together with a contribution on the difference between natural and artificial stimuli.) *Zsch. Biol.*, 1932, 92, 403-412.—(*Biol. Abst.* VII: 21075).
1625. Steiner, A. *Die Arbeitsteilung der Feldwespe Polistes dubia K.* (Division of labor in the field wasp *Polistes dubia* K.) *Zsch. f. vergl. Physiol.*, 1932, 17, 101-152.—Colonies were founded and established their combs in special observation boxes. Before the first brood appears the queen behaves much like a worker, engaging mainly in wing-fanning and water-carrying above the optimum temperature (35° C.), and at lower temperatures she performs other work. Later her function is principally reduced to temperature regulation and egg-laying. Occasionally a male engages in fanning or in larva-feeding. During the first five days after hatching the worker first rests, then shows "immature fanning"; later the orientation flight and field foraging appear, and she begins to feed larvae. An active period follows, in which some of the workers engage variously in all of the activities, field service most frequently, while others "specialize," in that more than 50% of their total activity is devoted either to field service or to comb service. The controlling factors are (1) individual (anatomical-physiological), e.g. bodily size, age, of greatest importance during the early days; (2) social factors such as contact with the brood and with nest companions; and (3) conditions surrounding the nest, e.g. temperature and the availability of materials. These factors operate as an inseparable complex.—T. C. Schneirla (New York University).
1626. Storch, O. *Die Schwimmbewegung der Copepoden, auf Grund von Mikro-Zeitlupenaufnahmen analysiert*. (The swimming movements of copepods analyzed on the basis of timed microphotography.) *Zool. Anz.*, Suppl. Bd., 1929, 4, 118-129.—(*Biol. Abst.* VII: 21050).
1627. Thompson, W. R., & Tennant, R. Influence of environmental change upon sensitivity of *Drosophila* larvae to ultraviolet radiation. *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 120-121.—After adding glacial acetic acid to the food of the larvae, it was found that sensitivity to ultraviolet radiation, as indicated by CO₂ respiration, increases with increase in acetic acid concentration. The median age at pupation was about the same in all cases.—P. Seckler (Radcliffe).
1628. Thornton, W. M. Electrical perception by deep sea fish. *Proc. Univ. Durham Phil. Soc.*, 1930-1931, 8, 301-312.—The auditory system of deep sea

fish is well developed, but it is difficult to see how such fish can give rise to sounds that stimulate each other. Many of them are blind. The paper suggests that stimuli and responses among fish may be electrical in nature, due, e.g., to the currents induced by the movement of the fish causing a motion of sea-water, a good electrical conductor, through the earth's magnetic field. In following this up, Regnart has shown that they are stimulated by currents as low as 2 microamperes per sq. cm., and this is greater than the currents that moving fish might be expected to set up in the above manner, which are of the order of 10^{-8} microamperes; but the gap is relatively narrow and further experiments on the margin of response of fish kept in suitable conditions of quiet and darkness are desirable.—(Biol. Abst. VII: 21051).

1629. Urban, F. Der Lauf der entflügelten Honigbiene (*Apis mellifica*) zum Licht und der Einfluss von Eingriffen an Rezeptoren, Centralnervensystem und Effectoren. (The path of de-winged honey bees, *Apis mellifica*, to light and the influence of lesions in the receptors, central nervous system, and effectors.) Zsch. wiss. Zool., 1932, 140, 291-355.—Normal bees in an optically homogeneous field advance in all directions. A horizontal beam of light orients photopositive bees at once, the direct advance being sometimes interspersed with unoriented ones. The bee can orient itself to one of several equally strong light stimuli just as if the others did not exist. If two lamps act at the same time the animal may advance for a time on the mid-perpendicular, sometimes in a zig-zag path, showing that it perceives both stimuli separately. In advancing, many animals tend to deviate to right or left; in the dark or with illumination from above this results in a spiral path. If, while a normal bee advances to the light, a second light shines in the field, the bee arrives nevertheless at her original goal. In continual switching of two lamps back and forth, the animals oscillate between the two but after a time become unoriented or may stop altogether. Bees blinded on one side produce, in general, at first spiral or arc-shaped paths toward the seeing side. Adaptation may take place, changing the spiral to a direct path. In rare cases they move in straight paths from the beginning. Of various equally strong stimuli, these bees prefer those lying on the seeing side. Partial blinding of one or both eyes does not influence bees essentially in their orientation. Occasionally they deviate toward the side having the smaller part of the eye blinded. By cutting a commissure between the sub-pharyngeal and first thoracic ganglion, bees (designated C-bees) may be forced into an asymmetrical position. In this condition they walk directly toward the light. In a homogeneous field they take a spiral path toward the intact side. If blinded on the operated side the C-animal behaves like any other unilaterally blinded bee; if on the intact side it is especially unoriented toward several stimuli. Adaptation occurs, but is slower and less complete than in merely unilaterally blinded bees. A C-bee with the fore part of the eye of the operated side blinded behaves at first like a similar bee with the same eye completely blinded; but within 10 trips it

goes in a straight path. Bees with the legs of one side shortened react much like C-bees. If one combines this operation with the cutting of a thoracic commissure, the latter has the greater effect.—(Biol. Abst. VII: 21052).

1630. Verrier, M. L. Etude des yeux d'une Blennide *Pholis gunellus* L. Présence d'une fovéa. (Study of the eyes of a blennioid *Pholis gunellus* L. The presence of a fovea.) Bull. Soc. zool., 1933, 58.—This animal is a rare fish possessing a fovea containing predominantly cones. The animals live chiefly in the shade or in diffuse light. The author offers two interpretations of the predominance of cones: either the fovea fails to conform to the mode of life of the fish or the cones are not the sole organs of vision.—M. H. Piéron (Sorbonne).

1631. Verrier, M. L. Les yeux et la vision de *Cerastes vipera* Wagl. et de *Vipera aspis* L. (The eyes and vision of *Cerastes vipera* Wagl. and of *Vipera aspis* L.) C. r. Acad. sci., 1933, 196, 723-725.—There are two kinds of cones, uniformly distributed in all parts of the retina, in the eyes of *Cerastes vipera*, one short and slender and the other long and massive, the two alternating almost regularly. Assuming the importance for acuity of the factor of the diameter of the visual cells, the author raises the question of the possibility of two modes of reaction for the two kinds of cones.—M. H. Piéron (Sorbonne).

1632. Verrier, M. L. Réfraction statique de l'oeil des céphalopodes. (Static refraction in the eye of cephalopods.) C. r. Acad. sci., 1933, 196, 1435-1437.—The author confirms the existence in cephalopods of a static hypermetropia which is much accentuated under water. The lens is quite spherical. This form renders less severe the hypermetropia which is caused by the difference in the refractive indices of the lens and the water. The experiments have been made either upon slightly anesthetized or upon decapitated individuals.—M. H. Piéron (Sorbonne).

1633. Verrier, M. L. Recherches sur les fovéas des poissons. Etudes des yeux de *Julis giofredi* Risso. (Researches on the fovea of fish. Studies of the eyes of *Julis giofredi* Risso.) C. r. Soc. biol., 1933, 113, 134-135.—These fish have a visual behavior which seems more precise than that of other fish. Their fovea is the most complex found among fish, but it occurs in conjunction with a spherical, non-deformable lens which can give only poor images. There is no parallelism between the retinal qualities and those of the dioptric mechanism.—M. H. Piéron (Sorbonne).

1634. Walston, H. D. Hysteria in dogs. Nature, 1933, 132, 243.—54 cases of dogs suffering from hysteria were investigated. Of these, all except one were fed on a preponderantly cereal diet: 26 of these, continuing on the same diet, remained hysterical, while 28, the diet of which was changed to contain more vitamin A, recovered. Recent work of Mellanby, in which dogs were fed on a cereal diet deficient in vitamin A, and in which symptoms resembling canine hysteria were aggravated by the addition of

wheat germ, is regarded as suggestive.—E. H. Kemp (Clark).

1635. Warden, C. J. *The animal mind.* *J. Genet. Psychol.*, 1933, 43, 49-64.—The historical development of interpretations of animal consciousness reveals a tendency to oscillate between the anthropomorphic right wing theories (Aristotle, Darwin, etc.) and the mechanistic left wing (Descartes, Loeb, Von Uexküll, etc.). The central party has recently come to the fore with their emphasis upon objective data only and their refusal to speculate concerning consciousness in sub-human forms.—J. F. Dashiell (North Carolina).

1636. Wartman, W. B., & McCutcheon, M. *Direction of amoeboid movement of leucocytes on a glass surface in an electric field.* *Proc. Soc. Exper. Biol. & Med.*, 1933, 31, 138-141.—The authors set out to discover whether the amoeboid motion of leucocytes can be directed by an electric current, and, if so, toward what pole the cells move, a matter of interest to those concerned with the general pathology of inflammation and the mechanism of chemotropism. After drawing an important distinction between galvanotaxis and electrophoresis, the authors describe their experiments, in which it was found that the leucocytes, in this case exudative polymorphonuclear leucocytes of the rabbit, when placed in an electric field, progress by amoeboid motion toward the cathode. The reason for the progression and direction of locomotion as well as its importance in the pathology of inflammation remains to be determined.—P. Seckler (Radcliffe).

1637. Wever, E. G., & Bray, C. W. *A new method for the study of hearing in insects.* *J. Cell. & Comp. Physiol.*, 1933, 4, 79-93.—A platinum or copper wire is inserted into the segment proximal to that containing the tympanum of an insect held in a suitable position on an indifferent electrode made of a pad of moist cotton. The electrical currents between the electrodes were amplified (voltage amplification 62-90 decibels) with a multi-stage amplifier, which latter was connected to a telephone receiver. The stimuli consisted of spoken words, organ pipe sounds, Galton whistle sounds, etc., and an oscillator delivering 32-20,000 double vibrations. Effects of the sound were observed in 3 katydids and 10 crickets. Two mole crickets were tried, but gave negative results owing to the fact that their small size prevented proper handling. Three kinds of sounds were heard in the receiver: a slushing sound, a burst of sound at the beginning of the stimulation which later diminished, and an effect occurring at the beginning of the sound from wind sources. These were believed to belong to the sensory system, the motor system and the tactile system respectively of the insect. Narcosis of the insect eliminated the sound. Evidence is presented to show that the tympanum is an auditory organ. In one specimen the range extended up to about 45,000 double vibrations.—O. W. Richards (Yale).

1638. Willems, H. P. A. *Über die Herzbewegungen bei der Weinbergschnecke (Helix pomatia L.)* (Con-

cerning cardiac activities in the Roman snail, *Helix pomatia* L.) *Zsch. f. vergl. Physiol.*, 1932, 17, 1-100.—The heart of *Helix* lacks a controlling center. Each of the two parts beats autonomously in its specific rhythm, as do portions of tissue separated from the heart. Normally the atrium beats with a frequency higher than that of the ventricle. During systole the heart is in refractory phase, but it responds to stimuli (e.g. electrical) at the onset of diastole.—T. C. Schneirla (New York University).

1639. Zawadowsky, B., & Slotow, M. *Über den Einfluss der Schilddrüse auf die höhere Nerventätigkeit bei Hunden. 4. Mitteilung. Einfluss der Schilddrüsenextirpation auf die bedingten Speichelsekretionsreflexe bei Hunden.* (Concerning the influence of the thyroid glands upon the higher neural functions in dogs. Pt. 4. The influence of thyroid extirpation upon the conditioned salivary reflex in dogs.) *Zsch. f. vergl. Physiol.*, 1932, 16, 89-110.—The study is concerned with the effect of thyroid gland extirpation upon previously established conditioned salivary reflexes. Two previously conditioned dogs were tested periodically after the operation until they died after eight or nine months. Thyroid extirpation was found to result in an increase in the latent period and a decrease in the intensity of the reflexes. The latter effect began to show itself within five or six weeks after the operation, and from this time until death the secretion was from 30 to 50% of the original amount. It is concluded that these results confirm the belief that the removal of the thyroid glands results in a reduction of the excitability of the cerebral cortex.—N. R. F. Maier (Michigan).

[See also abstracts 1518, 1534, 1547.]

EVOLUTION AND HEREDITY

1640. Black, D. *The brain cast of Sinanthropus—a review.* *J. Comp. Neur.*, 1933, 57, 361-368.—The cranial capacity of this extinct genus of primitive man appears to have equaled that of many individuals of surviving types of *Homo sapiens*. It probably exceeded 1000 c.c., on the average (the minimal for normal developing, living races being about 800 c.c.). The extent of development in each region of the brain is described. Of special interest is the evidence of marked development in the left inferior frontal region, which is the speech area of the modern brain. This fact, together with evidence that the lower jaw was slung in much the same way as that of modern man, provides good presumptive evidence that *Sinanthropus* possessed the necessary nervous mechanism for articulate speech.—C. P. Stone (Stanford).

1641. Fagg, C. C. *Psychosynthesis, or evolution in the light of Freudian psychology.* *Brit. J. Med. Psychol.*, 1933, 13, 119-142.—What are the evolutionary possibilities of achieving the perfected social organism? As the biologically progressive units of mankind will probably not be tolerated by democracy, the way out of the trend toward a mechanical utopia will have to be found by superman. Our knowledge of evolution and the unconscious now enable us to say something of the mode of emergence of superman

and of some of his characteristics. Evolution comes from groups maintaining normal metabolic balance. The study of the incipient tendencies toward divergence in the human species may be approached through the unconscious mind and metabolic polarity. Fagg distinguishes two types: the "inspector" (anabolic, anal, neurotic), and the "bohemian" (katabolic, urethral, psychotic). The outstanding personalities in science and art have usually presented a combination of both types. A still higher type is needed, capable of exploiting the qualities of these two species. He will spring from members of the race who conserve metabolic balance by composing conflicts and retain all the potentialities which have not been surrendered in the phylogeny of man. If men escape the rocks of neurotic compromise in sufficient numerical strength, they may establish the species *Vir supremus*.—M. E. Morse (Catonsville, Md.)

1642. Hankins, F. H. Is the differential fertility of the social classes selective? *Social Forces*, 1933, 12, 33-39.—The weight of evidence indicates that the differential fertility of the social classes should be regarded as a well-established fact. Both adults and children in the upper classes are taller, heavier, stronger, healthier, and freer from physical defects than in the lower classes. The evidence on mental differences suggests a close correlation between IQ and social status, being largely a consequence of the difference in the biological worth of the various social classes.—A. B. Hunter (Clark).

1643. Holub, A., & Holub, M. Zur Frage der Charakterentwicklung bei Zwillingen. (Consideration of the problem of the personality development of twins.) *Int. Zsch. f. Indiv.-psychol.*, 1933, 11, 263-281.—The main body of the article is concerned with the reinterpretation according to Adlerian principles of a series of eight case studies of twins taken from Lange's *Verbrechen als Schicksal*. The Holubs attack the position that the studies of twins prove the inheritance of criminal traits through the assumption that they were reared in the same environment. When parents, teachers, and adult observers assert that two siblings have been "treated alike" it remains to determine whether the children also experienced "sameness." The writers present the thesis that every human being enters the world with possibilities whose unfolding and development depend entirely upon the creative power of the individual himself. Neither environment nor heredity determines the personality development of the individual. This is rather the result of his own original attitudes toward these factors. These attitudes are produced by the subject himself in the first few years of his life. The interpretations of the cases suggested by the writers are that they are the result of social environmental influences.—O. N. de Weerd (Beloit).

1644. Notestein, F. W. The differential rate of increase among the social classes of the American population. *Social Forces*, 1933, 12, 17-33.—This is a study on the data secured by the Milbank Memorial Fund from the census schedules of 1900 and 1910, which seem to confirm the conclusions of Baber,

Ross, Sydenstricker, Pearl, Ogburn, and Tibbitts that fertility and social status are and have been for some time inversely related.—(Courtesy *Amer. J. Sociol.*)

1645. Osborn, F. Characteristics and differential fertility of American population groups. *Social Forces*, 1933, 12, 8-16.—The differential fertility of American population may be classified from the standpoints of ethnic, regional, and occupational distributions. Since in the present state of our knowledge we cannot measure the genetic potentiality for intelligence, all we can do is to measure what we may call cultural-intellectual development. Differences in this development among the ethnic groups are not consistent. The distribution of intelligence among regional groups is more consistent and shows an inverse relation to the index of fertility.—(Courtesy *Amer. J. Sociol.*)

1646. Rife, D. C. Genetic studies of monozygotic twins. I. A diagnostic formula. *J. Hered.*, 1933, 24, 339-345.—20 pairs of twins classed as identical by relatives or friends were studied. A diagnostic formula, based upon 4 qualitative and 4 quantitative tests, was devised to use in predicting the chances of a given pair being so similar in these 8 traits, if they were dizygotic rather than monozygotic. The qualitative traits, whose manner of inheritance is known, are: the blood groups, M-N agglutinin reaction, presence or absence of hair between first and second joints of fingers, and ability or inability to taste phenyl-thio-carbamide. The quantitative traits are: iris pigmentation, intelligence quotient, ridge count of finger patterns, and differences in stature, all of which have been tabulated with respect to sibling pair differences, as well as twin pair differences.—B. S. Burks (California).

1647. Rife, D. C. Genetic studies of monozygotic twins. II. Finger-patterns and eye-color as criteria of monozygosity. *J. Hered.*, 1933, 24, 407-414.—Evidence from the author's series of 20 pairs of identical twins seems to indicate that the value of finger-patterns for determining monozygosity has been considerably exaggerated, although when used with other criteria they are often good indicators. Iris pigmentation is a more reliable criterion. All of the identical twins studied (15 pairs) showed as great similarity as observed between the right and left eyes of a single individual, while none of 50 sibling pairs had the same iris pigmentation throughout the entire iris.—B. S. Burks (California).

1648. Ritchie, J. The origin of species. *Nature*, 1933, 132, 506-507.—The present trend in considerations of the problem of the origin of species is the denial of the possibility that fortuitous minimal variations, even under the pruning of natural selection, could ever bring about those fine adjustments between organisms and their environment which is the most outstanding characteristic of living things. As recent examples of a vitalistic position the author takes the suggestion of Broom that "there must be behind evolution spiritual agencies of varying degrees of intelligence" and that of Macfie of a "mento-

volition" back of evolution. Osborn's "aristogenesis" is mentioned as a descriptive concept, an attempt to define the actual steps of evolution. It is defined as "the gradual, secular, continuous, direct, reactive, adaptive origin of new biomechanisms" and is not thought of as an explanation or theory.—E. H. Kemp (Clark).

1649. Snyder, L. H. Studies in human inheritance. IX. The inheritance of taste deficiency in man. *Ohio J. Sci.*, 1932, 32, 436-440.—(Courtesy *Bibliographia Eugenica*).

1650. (W. G. L. C.) Population problems. *Nature*, 1933, 132, 689-691.—Problems mentioned are those related to migration, agricultural economics, the manufacturing-agricultural balance, optimum density, quantum of happiness, and interrelations between peoples and races. Present emigration policies are criticized.—E. H. Kemp (Clark).

[See also abstracts 1598, 1677, 1682, 1697, 1698, 1700, 1734, 1750, 1764, 1765, 1771.]

SPECIAL MENTAL CONDITIONS

1651. Allendy, R. Sadism in woman. *Psychoanal. Rev.*, 1933, 20, 437-439.—Sadism in woman asserts itself in different ways from that in man. Behind her passive sexuality lies an aggressiveness, which when her security is menaced asserts itself and sometimes develops into a sadism which resembles more "the terrifying and monstrous practices met with in the insect world."—D. Shakow (Worcester State Hospital).

1652. Bonaparte, M. Des autoérotismes agressifs par la griffe et par la dent. (Aggressive auto-erotism by tooth and nail.) *Rev. fr. de psychanal.*, 1933, 6, 192-216.—A general, theoretical discussion of the relation of aggression to such neurotic symptoms as tics and obsessions and to auto-erotism is given. Five types of aggressive auto-erotism by "tooth and nail" are distinguished, and the meaning of such aggressions is considered, together with their social function.—P. Blanchard (Philadelphia Child Guidance Clinic).

1653. Bonaparte, M. De la mort et des fleurs. (Death and flowers.) *Rev. fr. de psychanal.*, 1933, 6, 218-222.—The sexual symbolism of flowers, and their return to life each spring, are compared to the symbolism of the phoenix and fire mythology, as a denial of death. Flowers are also sent to the dead as a gesture of atonement to relieve the sender's feeling of guilt for hostility or neglect.—P. Blanchard (Philadelphia Child Guidance Clinic).

1654. Bond, F. B. The gate of remembrance; the story of the psychological experiment which resulted in the discovery of the Edgar Chapel at Glastonbury with a record of the finding of the Loretto Chapel in 1919. (5th ed.) New York: Dutton, 1933. Pp. 230. \$2.50.—R. R. Willoughby (Clark).

1655. Borel, A. Originalité de la psychothérapie psychanalytique. (The originality of psychoanalytic psychotherapy.) *J. méd. fr.*, 1933, 22, 134-137.—M. H. Piéron (Sorbonne).

1656. Brown, M. W. Charles Deslon, disciple of Mesmer. *Med. J. & Rec.*, 1933, 138, 430-431.—The story of Deslon, medical director of the Paris Faculty of Medicine, reveals a little known chapter in the history of psychotherapy. When Mesmer arrived in Paris in 1778, Deslon studied with him, encouraged him, and defended him against the prevailing opposition. Deslon's *Observations on Magnetism* (1780), in which he expounded Mesmer's discoveries, shocked the Faculty of Medicine, and with Mesmer's flight from Paris the friendship between the two men ended. Deslon, however, continued his treatments with brilliant success until his death in 1786. The 160 doctors instructed by him spread the cure, and Mesmer's method was reborn under various forms in foreign countries—in Sweden among the Swedenborgians and in Germany with Lavater.—M. E. Morse (Catonsville, Md.)

1657. Claude, H. Quelques considérations sur la psychanalyse. (Some considerations on psychoanalysis.) *J. méd. fr.*, 1933, 22, 107-109.—Psychoanalysis may give favorable results, especially in those cases which the therapy of specialists cannot reach, where profound disorders of sentiment and character seriously upset familial and social behavior. In these cases the possibility of a cure rests upon an early diagnosis and a judicious re-educational treatment, which only psychoanalysis can undertake.—M. H. Piéron (Sorbonne).

1658. Cronin, H. J. Phallic symbolism in a narcissistic neurosis. *Psychoanal. Rev.*, 1933, 20, 434-436.—Certain aspects of a case of psychosexual reactions to phallic symbols in a female patient are presented.—D. Shakow (Worcester State Hospital).

1659. Freud, S. Essais de psychanalyse appliquée. (Essays on applied psychoanalysis.) (Trans. by E. Marty & M. Bonaparte.) Paris: Gallimard, 1933. Pp. 254.—The translators have used some of the material in the tenth volume of Freud's complete works (1924), published by the Internationale Psychoanalytischer Verlag.—M. H. Piéron (Sorbonne).

1660. Freud, S. Psychogenèse d'un cas d'homosexualité féminine. (Psychogenesis of a case of feminine homosexuality.) *Rev. fr. de psychanal.*, 1933, 6, 130-154.—This report on the case of an 18-year-old girl was first published in German in 1920. An English translation was published in Vol. II of *Collected Papers*, 1925.—P. Blanchard (Philadelphia Child Guidance Clinic).

1661. Hamilton, G. V. The blackboard as an analytic accessory. *Psychoanal. Rev.*, 1933, 20, 388-400.—The author reports an experiment in the modification of analytic technique by the use of a blackboard on which is depicted Freud's topographic schema of the mind. In some cases he also writes the dream on it in numbered paragraphs and then uses these as stimuli for free associations. The values and dangers of this method for both analyst and analysand are discussed.—D. Shakow (Worcester State Hospital).

1662. Hesnard, A. Strange lust: the psychology of homosexuality. (Trans. by J. C. Summers.) New

York: Amethnol Press, 1933. Pp. 256. \$6.00.—After a brief review of some of the literature, the psychogenesis of homosexuality is described, also the characteristic attitudes and behavior of homosexuals. Identification with the mother is stressed as important in the development of homosexuality among men, although other factors such as incestuous repression, narcissism, etc., are noted. The relationship between homosexuality and neuroticism is considered, the defense reactions of the homosexual are discussed, and various types of therapy which have been tried with homosexuals are briefly mentioned. There are 16 chapters on homosexuality in males and four chapters on female homosexuality. The appendix contains three short case histories, apparently given in the words of the homosexual persons themselves.—*P. Blanchard* (Philadelphia Child Guidance Clinic).

1663. Laird, D. Calcium metabolism and the quality of sleep. *Med. J. & Rec.*, 1933, 138, 396-398.—Eight weeks' daily observation of the sleep of eight healthy young men indicates that supplementing the diet to increase calcium metabolism within the normal range does not alter the amount of sleep taken, but consistently betters the quality of normal sleep. The sleep of even normal sleepers, unaware of any sleep deficiencies, can still be improved in quality. The level of calcium metabolism, in short, determines to a measurable extent the quality of an individual's sleep. The data are given in tabular form.—*M. E. Morse* (Catonsville, Md.)

1664. Lambert, H. C. Cure through suggestion. (2 vols.) Pp. 132 & 256. New York: Moss & Kamin, 1933.—The suggestions used are supposed to have been given orally by J. H. Hyslop to the author through the mediumship of Eileen Garrett. Most of the material in the two volumes consists of the supposed conversations with Hyslop, who asserts that when he does not know the answer to a question he can, by relay, quickly obtain it from sources at his command.—*E. A. Kirkpatrick* (Leominster, Mass.)

1665. Loewenstein, R. La psychanalyse et la notion de constitution. (Psychoanalysis and the concept of constitution.) *Evolution psychiat.*, 2nd ser., 1932, No. 4, 57-65.—Psychoanalysis, although a therapeutic method, is essentially psychological; but, in the conception which it holds of the neuroses as the result of normal psychological evolution, it takes a major account of organic factors. Psychoanalysis allows for the existence of constitutional factors, but it reduces considerably their significance and sees in them certain predisposing factors. When psychoanalysis succeeds in making precise some such factor, it makes an important contribution to the study of constitutions.—*M. H. Piéron* (Sorbonne).

1666. Middleton, W. C. Nocturnal dreams. *Sci. ent. Mo.*, 1933, 37, 460-464.—Some results are listed from a questionnaire distributed with cautions.—*J. F. Dashiell* (North Carolina).

1667. Morgenstern, S. La psychanalyse infantile. (Psychoanalysis of children.) *J. méd. fr.*, 1933, 22, 116-119.—The psychoanalysis of children under 12

is much more difficult than that of adults. The author stresses the importance of imagination and the use of drawing and play.—*M. H. Piéron* (Sorbonne).

1668. Morgenstern, S. Quelques aperçus sur l'expression du sentiment de culpabilité dans les rêves des enfants. (Some observations on the expression of the feeling of guilt in the dreams of children.) *Rev. fr. de psychanal.*, 1933, 6, 155-174.—The differences and the similarities found in dreams of children as compared to those of adults, from the psychoanalytic viewpoint, are described. There is also some discussion of neuroses in children and of drawings produced by child patients. The general statements are supplemented with illustrative material from cases of children being analyzed. The ages of the children whose dreams and drawings are reported range from four to twelve years.—*P. Blanchard* (Philadelphia Child Guidance Clinic).

1669. Parcheminey, G. De l'idée de régression dans le problème de la genèse des symptômes névrotiques. (The idea of regression in the problem of the genesis of neurotic symptoms.) *Rev. fr. de psychanal.*, 1933, 6, 175-191.—The psychoanalytic and physiological theories of the psychoneuroses are reviewed, with special stress on the psychoanalytic concept of regression in relation to conditioned reflex mechanisms, a combination of psychoanalytic and biological theories being held as the explanation of the formation of neurotic symptoms.—*P. Blanchard* (Philadelphia Child Guidance Clinic).

1670. Peck, M. W. Outline of psychoanalysis. *Psychoanal. Rev.*, 1933, 20, 428-433.—Some fundamental principles of psychoanalysis as a psychotherapeutic technique are presented.—*D. Shakow* (Worcester State Hospital).

1671. Prince, W. F. A certain type of psychic research. *Bull. Boston Soc. Psych. Res.*, No. 21. Pp. 30.—A critical analysis and logical exposure of a series of reports appearing in the *J. Amer. Soc. Psych. Res.* during the last four years, covering experiments by a group of ladies in New York in which certain "messages" were supposed to have been received. Pages 31 to 47 contain four other lengthy and evaluative reviews, of recent books on psychic research.—*J. B. Rhine* (Duke).

1672. Stevens, G. C. High blood pressure as a phallic symbol. *Psychoanal. Rev.*, 1933, 20, 401-411.—A persistent high blood pressure of some years duration on a girl of nineteen is discovered in analysis to be symbolic of the phallus.—*D. Shakow* (Worcester State Hospital).

1673. Stone, H. M., & Stone, A. Genital spasm as a cause of sexual disharmony. *Med. J. & Rec.*, 1933, 138, 350-353.—There are two types of vaginismus: the physical, due to local lesions; and the psychic, called by the authors "genital spasm," in which local abnormalities are absent and the spasm is much more extensive and violent and is accompanied by distress. The etiology lies in faulty sex education, various negative conditionings in early life, psychosexual traumata, and anxiety neuroses.

Although consciously the patient may be emancipated from sex tabus, the inhibitions and protective reactions remain. Only the extreme cases need psychiatric treatment; the gynecologist can easily give, along with the physical treatment, the instruction and simple psychotherapy needed. Prevention must of course begin in childhood. In adult life, the most important prophylactic is premarital consultation.—*M. E. Morse* (Catonsville, Md.)

1674. Wittels, F. Revision of a biography. *Psychoanal. Rev.*, 1933, 20, 361-374.—A statement of the present views of the author on his biography of Freud published in 1923. It contains two parts, the first of which also appears in the *American Journal of Psychology* for October, 1933. Mainly, the article consists of retractions of many of his old statements and expositions of the author's present stand on various aspects of psychoanalysis.—*D. Shakow* (Worcester State Hospital).

1675. Wolff, W. La orientacio profesional y la psicologia experimental profunda. (Vocational guidance and experimental depth psychology.) *Rev. de psicol. i ped.*, 1933, 1, 322-327.—Wolff's problem is to unite the viewpoint of depth psychology with the experimental method in the service of characterology and vocational guidance; i.e., can these develop a technique for submitting the unconscious trends and impulses to experimentation? The author believes that his original technique of exploring the subject's subconscious attitude toward himself by means of unrecognized auto-evaluations offers a solution. He illustrates this in connection with memory, the voice, the hands and face, and handwriting. Such self-judgments are exact and penetrating and bring out unconscious attitudes and conflicts. In these evaluations, the subject identifies himself not with his personality as known to others, but with his unconscious image. Apprehension of the individual's internal tensions and the image of his desires brings entirely new viewpoints to vocational guidance, and, on the other hand, the psychotechnical method can give notable characterological results if it takes account of psychic dynamics.—*M. E. Morse* (Catonsville, Md.)

[See also abstracts 1455, 1490, 1503, 1564, 1641, 1723, 1775, 1826, 1878, 1883.]

NERVOUS AND MENTAL DISORDERS

1676. [Anon.] Thomsen's disease. *J. Hered.*, 1933, 24, 345-346.—A brief summary of a study reported in full by Jelliffe and Ziegler elsewhere.—*B. S. Burks* (California).

1677. Bing, R. Complicated dystrophic imbecility observed in brother and sister. *Norsk. mag. f. laegevidensk.*, 1931, 92, 956.—Describes two cases of Laurence-Moon-Biedl's syndrome, brother and sister. Symptoms are imbecility, adiposogenital dystrophy, retinitis pigmentosa, and polydactylism. Treatment with calcium, thyroid and pituitary extract brought a change from apathy and dullness to signs of greater alertness and interest.—*D. J. Ingle* (Minnesota).

1678. Clark, C. P. The ocular disturbances in epidemic encephalitis. *Amer. J. Ophth.*, 1933, 16, 606-611.—A detailed description of the ocular symptoms in both the acute and the chronic stages of epidemic encephalitis are presented.—*T. Karwoski* (Dartmouth).

1679. Claude, H. Remarques sur quelques essais de physiologie pathologique en pathologie mentale. (Remarks on some excursions of pathological physiology into the field of mental pathology.) *Biol. méd.*, 1933, 63, 111-125.—In discussing the theories of Bekhterev and Pavlov on the subject of cerebral functions, the author concludes that if the nervous centers constitute a perfectly equipped factory it is still unknown how the motor force is created which conditions the neural functioning.—*M. H. Piéron* (Sorbonne).

1680. Claude, H., & Corman, L. Syndrome catatonique atypique avec sursimulation chez un délirant chronique. (Atypical catatonic syndrome with additional simulation in a chronic delirious patient.) *Ann. méd.-psychol.*, 1933, 91, 492-502.—A patient who had been diagnosed as persecutory delirium was discharged as cured. Soon afterward he apparently became deaf and later began to lose his vision. He became cataleptic and did only a few simple things upon the written command of his wife. For instance, he would go to bed when told and would feed himself if a fork were put in his hand. No organic basis could be found for his poor audition and vision. When given a little ether, he said he was simulating; that he had decided to become deaf and then blind. He may have been consciously simulating. On the other hand, there was some reason to believe that he was merely reacting to his persecutory delusions, trying to evade their power by making himself doubly sick.—*M. B. Mitchell* (New Hampshire State Hospital).

1681. Courtois, A. Crise économique et psychopathie. (The economic crisis and psychopathic states.) *Prophyl. ment.*, 1933, 8, 18.—Does the economic crisis appear to have an effect upon insanity? If one excludes suicides of ruined individuals, statistics show that the crisis does not appear to have an important influence upon the number and gravity of serious mental disorders. Perhaps such an influence might be found on those cases which can hardly be classed as mental disorders.—*M. H. Piéron* (Sorbonne).

1682. Cronin, H. J. An analysis of the neuroses of identical twins. *Psychoanal. Rev.*, 1933, 20, 375-387.—A report of the major aspects of the cases of two male monozygotic twins. The analysis revealed differences in their affective states and in their psychosexual development, despite their similar intellectual abilities. One was more mature than the other and had made a heterosexual adjustment, while the other had not. The latter gradually became involved in a complex situation which included the wife of the former.—*D. Shakow* (Worcester State Hospital).

1683. Epstein, A. L. Somatologische Studien zur Psychiatrie. VII. Die vestibulären Störungen bei den

akuten Alkoholpsychosen. (Somatological studies in psychiatry. VII. Vestibular disorders in acute alcoholic psychoses.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1933, 143, 759-779.—Vestibular disorders appear in all stages of chronic alcoholism. The significance of such disturbances for psychiatry lies in the high sensitivity of the vestibular apparatus to poisons and infections; in their clinical role, as very early symptoms of psychoses; and theoretically, in the light which their higher forms shed upon certain widespread forms of delusion.—C. W. Fox (Rochester).

1684. Ey, H. **La notion d'automatisme en psychiatrie.** (The concept of automatism in psychiatry.) *Evolution psychiat.*, 2nd Sér., 1932, No. 3, 11-35.—After presenting the ambiguous nature of the concept of automatism and giving the two extreme definitions of automatic activity, the author divides automatic activity into the following large groups: (1) phenomena whose mechanisms are purely psychological and particularly Freudian—impulsions, obsessional states, and neurotic phenomena; (2) organically conditioned phenomena resulting from structural or functional accidents, so that mental activity is reduced to a lower affective and imaginative plane—dreams, sleep, and confusional states; (3) biologically conditioned phenomena, analogous to the foregoing but with a more severe defect in mental activity, which is reduced to an inferior level—associative automatism, demential ideas or acts; (4) phenomena whose appearance seems directly connected with cerebral disturbances, neuro-biological automatisms proper which occur in psychiatric affections—convulsions, agitation, hallucinations, dispositional troubles. In most cases of automatism the mechanism appears to be double. On the one hand there is an essentially biological etiology with a super-added psychological mechanism; and on the other hand there is the case either of phenomena entirely determined by impulses, the desires of the psychological personality, or of phenomena determined purely mechanically.—M. H. Piéron (Sorbonne).

1685. Fenton, N., FitzGerald, M. A., Fearney, E. E., Glavin, A., Hawley, E., & Raper, G. F. **An outline of the educational program at Pacific Colony.** *J. Juv. Res.*, 1933, 17, 191-210.—Pacific Colony is a state institution for mental defectives in southern California. The outline provided is rather detailed, including not only a statement of the general educational, recreational, and vocational aims of Pacific Colony, but also a description of the kinds of projects used with defectives whose potentialities fall at different levels.—H. L. Koch (Chicago).

1686. Fröschels, E. **Erkenntnistheoretische Zuordnung und Begründung der alten und neuen Aphasitheorien.** (Epistemological relationship and foundation of the old and new theories of aphasia.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1933, 143, 589-604.—The writer discusses several theories of aphasia, some representing associationistic psychology, others inclining toward a psychology of totalities. Each of these trends has its bases in the nature of human

research and each should be understood, even though it be only a partial truth.—C. W. Fox (Rochester).

1687. Gadelius, B. **Human mentality in the light of psychiatric experience.** Copenhagen: Levin & Munksgaard, 1933. Pp. 620. Cr. 33.—English translation of the first two parts of *Det manskliga Själslivet*, enlarged and revised. It is intended "as a general guide to normal psychological as well as psychopathological phenomena." An introductory section of two chapters, 83 pages, discusses the history of psychiatry, the care given the mentally ill in the past, and epistemological views and working methods. A second section of eleven chapters, 285 pages, deals with the functional structure of mental life and its morbid changes. Sensation, perception, consciousness, stream of thought, thinking, memory, affect, instinct perversion, regressions, and morbid changes in these are among the topics discussed. The next section, two chapters, 156 pages, deals with endogenous and exogenous mental diseases and the problem of heredity. The last section, three chapters, 90 pages, discusses the principles of modern treatment, psychoanalysis as a theory and mode of treatment, and treatment from a criminological point of view. The book is indexed.—M. H. Erickson (Worcester State Hospital).

1688. Giorgi, L. **Sindromi melanconiche nella encefalite epidemica cronica.** (Melancholic syndromes in chronic epidemic encephalitis.) *Riv. di psicol.*, 1933, 29, 120-128.—Three cases of depressive psychoses developed during chronic epidemic encephalitis are illustrated, and the psychomotor symptoms characteristic of the common melancholic syndrome are examined with particular reference to the theories that relate these symptoms to lesions of the basal nuclei. These theories do not seem to be supported by valid objective data; in fact, they are contradicted. It would appear rather that the psychomotor symptoms in these cases are related to cortical lesions.—T. M. Abel (Sarah Lawrence).

1689. Gjessing, R. **Über Ätiologie und Pathogenese der Schizophrenie.** (On the etiology and pathogenesis of schizophrenia.) *Acta Psychiat. et Neur.*, 1933, 8, 373-384.—A critical review of the methods of investigation of schizophrenia from the time of Kraepelin to the present, concluding with the suggestion that in the future one must resort to systematic follow-up studies over a period of years, with the assistance of well-trained chemists and physiologists.—M. L. Reymert (Mooseheart Laboratory for Child Research).

1690. Grimbart, D. C. **La notion d'intuition délirante en psychologie.** (The concept of delirious intuition in psychology.) *Rev. de phil.*, N.S., 32, 517-531.—Intuition is essentially an immediate life of the mind which adheres without control to a new representation. It is a question of a sudden illumination which brings about an immediate conviction. Intuition is frequently at the basis of passionate states and of certain deliria. It is manifest in psychopathology as a force of great impulsiveness, especially when it appears on a foundation of psychic debility,

where it is complicated with morbid interpretations or hallucinations.—*M. H. Piéron* (Sorbonne).

1691. Halberstadt, G. *Contribution à l'étude des psychoses d'involution. La dysphrénie antitonique.* (Contribution to the study of involuntional psychosis; the antitonic dysphrenia.) *Ann. méd.-psychol.*, 1933, 91, 470-481.—Five cases are reported similar to those described by Van der Scheer as "antitonic dysphrenia." They all occurred in women between the ages of 45 and 58. In each case, the clinical picture was dominated by negativism on a profound depressive basis, accompanied by some confusion and ending in a dementia. The author is uncertain whether such cases as these should be considered as a separate disease or a variety of some other form of psychosis.—*M. B. Mitchell* (New Hampshire State Hospital).

1692. Helweg, H. *Künstlerische Produktion bei Schizophrenen.* (Artistic production by schizophrenic patients.) *Acta psychiat. et neur.*, 1933, 8, 445-446.—After demonstration of a number of drawings by a schizophrenic patient, not artistically endowed, the drawings are compared to the scribbles made by people when preoccupied by something else. In artistically endowed patients, however, it frequently happens that the illness and the outer situation release a unique imaginative activity. The case of a young schizophrenic woodcarver, who before taking ill was clever technically, but had no originality, and who developed a great freedom of imagination in his work during his stay in the institution, is described. In the discussion of this paper, Reiter drew a parallel with Van Gogh.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1693. Hu, Y. S. *Individual difference and mental hygiene.* *Chekiang Educ. Admin. Weekly* (Chinese), 1933, 4, 1-6.—The author first points out that mental hygiene in its wider sense is education proper, and may be called "educational hygiene." He then discusses the bearing of (1) sex difference, (2) physiological difference in the same sex, (3) intellectual difference, and (4) temperamental or character difference upon mental hygiene and education.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1694. Jahrreiss, W. *Die angeboren und früh erworbenen Schwachsinnszustände.* (Congenital and early developed feeble-mindedness.) *Fortsch. Neur. Psychiat. u. Grenzgeb.*, 1933, 5, 407-418.—This is a survey article with sections devoted to the inheritance of feeble-mindedness, therapeutic questions, eugenics, training and organ therapy, amaurotic idiocy, mongoloid idiocy, and experiments in clinical, pathopsychological and neurological questions concerning mental deficiency. There is a full bibliography.—*D. S. Oberlin* (Newark, Del.).

1695. Janet, P. *La force et la faiblesse psychologique.* (Psychological power and weakness.) Paris: Maloine, 1932. Pp. 326. Fr. 35.—This book is a selection from the courses given by the author at the Collège de France. Many questions from medical psychology are reviewed, but the author emphasizes exclusively psychological power and weakness and their role in the neuroses and psychoses. The first

part, dealing with dynamic symptoms, contains nine lectures on such problems as the sentiments, psychological power, and the laws of equilibrium. The second part contains six lectures and discusses sleep and social factors, and the problems of the mental budget. The third part contains ten lectures devoted to psychological equilibrium, including deliria of persecution, depressions, manias, dementias, and obsessions.—*M. H. Piéron* (Sorbonne).

1696. Janvrin, F. *Diagnosis of a nervous disease by sound tracks.* *Nature*, 1933, 132, 642.—The method of registration of speech on sound films has recently been introduced as a method of diagnosing nervous diseases. In vowel registration a jet of air from the glottis is recorded as a sharp upward jerk, and, in normal subjects, the period of the jerks changes slowly. In patients known to be cases of disseminated sclerosis the upward jerks follow one another at irregular intervals. This indicates that the muscles governing the laryngeal action were shaky in their coordination.—*E. H. Kemp* (Clark).

1697. Kalpa, I. *The importance of inheritance in endogenous psychoses.* *Acta psychiat. et neur.*, 1933, 8, 443.—Title and author announced in the Report on the Fifth Congress of Scandinavian psychiatrists, Copenhagen, 1932. No manuscript received.—*M. L. Reymert* (Mooseheart, Ill.).

1698. Lange, J. *Die eugenische Bedeutung des Schwachsinnns.* (The eugenic significance of feeble-mindedness.) *Das kommende Geschlecht*, 1933, 7. Pp. 36.—(Courtesy *Bibliographia Eugenica*).

1699. Lhermitte, J., & Trelles, J. O. *Sur l'apraxie pure constructive. Les troubles de la pensée spatiale et de la somatognosie dans l'apraxie.* (Concerning pure constructive apraxia. Disorders of spatial thinking and of somatognosia in apraxia.) *Encéph.*, 1933, 28, 413-444.—All recent anatomical work shows that lesions strictly localized in the parietal lobe may arouse disturbances of voluntary movement of an apraxic order. Furthermore, the disorder of movement stands in close relationship to a profound modification of the representations of space, and especially to the loss of harmony which normally holds between the reciprocal play of spatial thinking and voluntary motor activity. Moreover, all processes which interrupt the paths between the sensory-motor and the visual areas are apt to produce a disturbance in the representation of the physical ego and destroy the knowledge which we have of our own body. A bibliography of 45 titles.—*M. H. Piéron* (Sorbonne).

1700. Liebold, F. *Erblichkeit und "Psychopathie."* (Inheritance and psychopathy.) *Monatssch. f. Psychiat.*, 1933, 86, 1-36.—(Courtesy *Bibliographia Eugenica*).

1701. Lundholm, H. *Laboratory neuroses.* *Character & Personality*, 1933, 2, 127-133.—All subjects were first conditioned to withdraw the finger from an electric contact on the flashing of a light or sounding of a hammer. Then various conflicts were produced by introducing hypnotic suggestions which were at variance with the previous conditioning or with post-

hypnotic experimental instructions. "Escape" was effected by amnesia or hysteria, and under certain conditions the subjects developed neurasthenia and hallucinosis. The neuroses are discussed in the light of the author's theory of hormic psychology.—*M. O. Wilson* (Oklahoma).

1702. Magee, J. H. Pathological arson. *Scient. Mo.*, 1933, 37, 358-361.—Many different forms of this mental aberration appear.—*J. F. Dashiell* (North Carolina).

1703. Mallet, R. L'obsession de négation. (The obsession of negation.) *Presse méd.*, 1933, No. 46, 925-926.—The obsession of negation constitutes a syndrome wherein the fixed idea is only one of the elements appearing generally on a psychasthenic background. The ideational theme makes the obsession specific and differentiates it from the delusional theme which accompanies it.—*M. H. Piéron* (Sorbonne).

1704. McCulloch, T. L. Studies in cerebral function. V. A study of an aphasic's learning to read. *Publ. Univ. Calif. Los Angeles, Educ., Phil., Psychol.*, 1933, 1, 107-109.—The subject made rapid and great improvement in reading a standard selection and a corresponding, but lesser, improvement in reading a varied selection (changed from day to day).—*E. H. Kemp* (Clark).

1705. Sjöbring, H. Etiology and pathogenesis of endogenous psychoses. *Acta psychiat. et neur.*, 1933, 8, 385.—Title and author announced in the Report on the Fifth Congress of Scandinavian psychiatrists, Copenhagen, 1932. No manuscript received.—*M. L. Reymert* (Mooseheart, Ill.).

1706. Sjögren, T. Klinische und vererbungsmedizinische Untersuchungen über eine Oligophrenieform mit congenitalem Cataract. (Clinical and hereditary medical investigations on a form of oligophrenia with congenital cataract.) *Acta psychiat. et neur.*, 1933, 8, 441.—A preliminary report of 34 cases in 25 families. The statistical analysis seems to show that this form of oligophrenia follows a recessive hereditary course. The study is being continued and full report will be published later.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1707. Robin, G. Neurasthénie et psychasthénie infantiles. (Infantile neurasthenia and psychasthenia.) *Evolution psychiat.*, 2nd ser., 1932, No. 4, 93-105.—The distinction in psychiatry between neurasthenia and psychasthenia is clear-cut. Neurasthenia is composed of bodily impressions, while psychasthenia calls upon these same impressions. The fatigue aroused is of a psychic character and rests upon the apparent impossibility of a normal mental functioning. In infantile neuro-psychiatry the two syndromes are mixed and not clearly separated. The disorders are supported from a common basis which appears to have a neuro-biological substratum.—*M. H. Piéron* (Sorbonne).

1708. Searle, W. F. Musical experiment with patients and employees at Worcester State Hospital.

Occup. Therap. & Rehab., 1933, 12, 341-356.—Five piano numbers of pronounced emotional content were played to psychotic patients and to hospital employees, with instructions to write what each number "means to you." Some patients showed a surprising appreciation of the moods involved and in some cases were superior to the normal employees. Some individuals may be innately appreciative. We should not patronize psychotics in musical and artistic fields, for some of them may have normal appreciation.—*H. E. Burr* (Ohio State).

1709. Smith, J. Ätiologie und Pathogenese der endogenen Psychosen. (Etiology and pathogenesis of endogenous psychoses.) *Acta psychiat. et neur.*, 1933, 8, 387-388.—This is a brief summary of a lecture pointing out the different hereditary backgrounds (based on recent German studies) of dementia praecox and manic-depressive psychosis. Future research must combine data on heredity with laboratory investigation in order that these two diseases may be properly differentiated and so that it may be found what particular mechanisms are broken down in each disease.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1710. Tomasson, H. Richtlinien für die Behandlung manisch-depressiver Depressionen. (Directions for the treatment of manic-depressive depressions.) *Acta psychiat. et neur.*, 1933, 8, 425-440.—Out of a total of 600 depressions, the author selected on certain criteria 46 patients who were well at the time of treatment. The results of this comparative investigation on the effect of certain drugs are summarized in tables. Among the conclusions are: (1) bromide-codein has an unfavorable effect on all basic symptoms, except on certain cases of fear; (2) the pilocarpin containing folia jaborandi has a favorable effect on all basic symptoms; (3) fear symptoms, even in light cases, are increased by ephedrin; (4) in the most severe cases of fear, acetylcholin is without the slightest effect. In such cases, ergotoxin, however, has a decided effect on fear.—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1711. Toulouse, —. Conflits sociaux et adaptation mentale. (Social conflicts and mental adaptation.) *Prophyl. ment.*, 1933, 8, No. 36, 1-5.—The author claims that all social disorders from which we currently suffer (financial crises, unemployment, war, revolutions) are the result of the incapacity of the brain to adapt well to more and more complex conditions. Mental hygiene alone is able to make the troubled individual and collective life well.—*M. H. Piéron* (Sorbonne).

1712. Werner, A. A. Symptoms accompanying ovarian hypofunction. *J. Missouri Med. Asso.*, 1931, 28, 363.—In 316 cases of ovarian hypofunction the author found nervous and mental symptoms of the following order of frequency (per cent): subjective nervousness, 99.3; hot flashes, 92.1; excitability, 76.5; fatigability, 76.5; vertigo, 70.9; irritability, 64.4; depression and crying, 61.8; disturbed sleep, 61.9; decreased memory, 53.3; psychosis, 26.7. It is

thought that some cases of neurasthenia may result from ovarian hormone deficiency.—*D. J. Ingle* (Minnesota).

1713. Ziegler, L. H. *Hysterical fugues*. *J. Amer. Med. Asso.*, 1933, 101, 571-576.—Includes a brief history of the medical interpretation of hysteria and refers to the more important publications on the subject of fugues. The relation of fugues to other diseases is described. Detailed accounts are given of three cases of amnesic fugues. The author finds narcosis as produced by sodium luminal and similar drugs as effectual as hypnosis for invading the amnesia.—*D. J. Ingle* (Minnesota).

[See also abstracts 1450, 1452, 1475, 1515, 1581, 1588, 1634, 1733, 1766, 1776, 1781, 1782, 1823, 1852, 1877.]

PERSONALITY AND CHARACTER

1714. Adler, A. *Ueber den Ursprung des Strebens nach Überlegenheit und des Gemeinschaftsgefühles*. (Concerning the origin of the striving for superiority and of the social sense.) *Int. Zsch. f. Individ.-psychol.*, 1933, 11, 257-263.—A philosophic discussion based on anthropomorphic interpretations of "life" and various biological adaptive functions. Ultimately Adler concludes that the origin must rest in inborn characters which become modified through experience.—*O. N. de Weerdt* (Beloit).

1715. Allendy, R. *Les constitutions psychiques*. (Psychic constitutions.) *Evolution psychiat.*, 2nd ser., 1933, No. 3, 9-12.—It is necessary to confirm the regular agreement between certain physiological or morphological dispositions and certain psychological tendencies. In terms of this parallelism the author attempts to establish a classification of psychic constitutions as follows: (1) The first type is both restrained and passive. It is the type to be described as lazy, parasitic, ambitious and indolent, egoistic and smiling, an infantile type. (2) The second type is restrained and active, aggressive, egoistic and cruel, appearing especially at puberty. (3) The third is extraverted and active, directed principally toward authority, production, and the ambition to impose itself on others. (4) The fourth type joins to extraversion a sort of passivity, and the individual turns all of his interest on his associates not in order to direct or dominate them, but to endure them and to evaluate their feelings toward him.—*M. H. Piéron* (Sorbonne).

1716. Barnett, J. H. *Personality in primitive society*. *Character & Personality*, 1933, 2, 152-167.—"It would seem that such scholars as Lévy-Bruhl and others have over-estimated the dominance of the individual by the group in primitive society. The denial of initiative on the part of primitive man in dealing with his life situations arising out of a definite cultural base does not seem to be justified. The primitive individual could and did manipulate the network of relations which constitutes the most vital part of a culture and of group life. Powers of imagination, will, and sheer physical energy accorded

to the unusual individual in primitive society rewards perhaps no less desirable than those which contemporary culture bestows upon those individuals who ignore, change or successfully defy the web of conventions penetrating all aspects of our life and culture."—*M. O. Wilson* (Oklahoma).

1717. Campbell, A. A. *A study of the personality adjustments of only and intermediate children*. *J. Genet. Psychol.*, 1933, 43, 197-206.—200 college students, 100 of each sex, were paired for family position (only child vs. intermediate child), intelligence test score, college class, and sex. They were examined with the Bernreuter Inventory and the Cason Annoyance Test. Among the boys, the only children showed slightly greater scores in neuroticism, self-sufficiency, and dominance; but among the girls the only children made definitely greater scores on neuroticism and introversion and smaller scores on dominance and self-sufficiency. Both only-child groups made significantly more variable scores. No difference between only and intermediate children was found in physique or in scholarship.—*J. F. Dashiell* (North Carolina).

1718. Cantril, H., Rand, H. A., & Allport, G. W. *The determination of personal interests by psychological and graphological methods*. *Character & Personality*, 1933, 2, 134-143.—After agreeing upon a program of investigation a psychologist and a graphologist determine the extent to which their methods are in harmony in measuring personality. The psychologist used Allport and Vernon's *Study in Values* and the graphologist used handwriting specimens. Amount of the agreement is indicated by the coefficients of correlation for the values concerned: esthetic, .40; economic, .29; theoretic, .25; political, .07; religious, -.06; combined, .21 (50 cases). Whatever agreement exists between psychology and graphology is a tribute to the progress of each method; each must be correct to some degree. However, until higher agreements are attained, or until one method becomes definitely superior, vain partisan disputes should be avoided. (This experiment is critically evaluated by graphologist Meloun in the same issue.)—*M. O. Wilson* (Oklahoma).

1719. Codet, H. *Constitutions, mentalités, tempéraments psychiques*. (Constitutions, mentalities, and psychic temperaments.) *Evolution psychiat.*, 2nd ser., 1932, No. 4, 15-21.—The author suggests that the term constitution be reserved for the individual's habitual manner of acting and being which results from personal and hereditary factors. In such a case it is helpful to employ the notion of mentality to describe significant groups of durable aptitudes, of genuine psychic temperaments, of simple forms of character, or of true anomalies. It is necessary to limit oneself to the interpretation of pathogenic mechanisms without prejudicing etiological explanations.—*M. H. Piéron* (Sorbonne).

1720. Codet, H. *L'arriération affective*. (Affective retardation.) *J. méd. fr.*, 1933, 22, 126-130.—In the development of the individual from birth to death, intelligence, memory and judgment develop progres-

sively. In contrast the life of instinct, desire, and sentiment evolves according to different modalities, in part in the clear consciousness of the individual, in part in his unconsciousness, often escaping rational criticism and commanding internal satisfaction. There are persons in whom a persistence of infantile traits by the side of an intellectual development creates a conflict between their behavior and the conscious desire to be or to accomplish something. This disharmony is called affective retardation.—*M. H. Piéron* (Sorbonne).

1721. Dumas, G. *La tristesse*. (Sadness.) *Rev. scient.*, 1933, 71, 455-463.—A description accompanied by 16 illustrations of the large group of expressions of sadness. The author treats in turn muscular hypotonus in passive sadness, expression in facial paralysis, and the expressions of passive and active sadness.—*M. H. Piéron* (Sorbonne).

1722. Ferrière, A. *Les éléments constitutifs du caractère*. (The constitutive elements of character.) *Ann. de l'enfance*, 1933, 6, No. 58-59, 1193-1217.—*M. H. Piéron* (Sorbonne).

1723. Fromm, E. *Die psychoanalytische Charakterologie und ihre Bedeutung für die Sozialpsychologie*. (Psychoanalytic characterology and its significance for social psychology.) *Zsch. f. Sozialforsch.*, 1933, 1, 253-277.—Sexuality in the Freudian system passes through three stages, the oral-, anal-, and genital-erotic, each of which determines the forms of satisfaction required by the individual while in that stage. In passing from one stage to another the sexual energy of the previous stage is either sublimated or passed on to the next stage. Anal-erotic sublimation is the most common character trait of our present bourgeois society, and accounts for the predominance of economic values. It is necessary to make distinctions in treating the various social classes from this point of view because their different social positions allow different types of sexual satisfaction.—(Courtesy *Amer. J. Sociol.*)

1724. Janet, P. *L'amour et la haine*. (Love and hate.) Paris: Maloine, 1933. Pp. 307.—The author studies the combination of the sentiments with social conduct, giving rise to two essential parts of the book. The first part deals with the elementary sentiments themselves, for example, the sentiments of emptiness, of triumph, of effort and fatigue, and of anguish, and with the related social conduct as revealed in sexual tendencies, modesty, caresses, imitation and collaboration, order and submissiveness, discussion, the social hierarchy, and individual forms of conduct. The second part studies the true affective sentiments which arise from the relations between the elementary sentiments and social conduct, as is the case in antipathy and sympathy, hate and love.—*M. H. Piéron* (Sorbonne).

1725. Lange, J. *Facial lupus and personality*. *Character & Personality*, 1933, 2, 117-126.—Patients suffering from facial lupus of a disfiguring nature do not suffer the disintegrating effects on personality that might be expected. They, like normals, learn to practice resignation and to surrender one position

after another in life. "The gravest mental sorrows are often absorbed within the development of the personality without leaving any trace. Simple resignation is here of primary importance. The mental turmoil nowhere breaks through the framework of the preestablished development. It is probable that those who are broken by their mental sorrow were broken in advance."—*M. O. Wilson* (Oklahoma).

1726. Meloun, J. *The study of values—test and graphology*. *Character & Personality*, 1933, 2, 144-151.—This is a critical evaluation of an experiment by Cantril, Rand and Allport, designed to discover the common ground between the psychological and graphological methods of studying personality. The experiment is hailed as a new step in psychodiagnostics. The method of approach, however, is limited, first, because the psychologist's method does not take into consideration the fact that the traits in question are ambiguous and mutable. The psychologist must secure more reliable measures of dispositional personality traits. Second, any attempt to bring the two methods together is limited by the subjective factors of the graphological method. Objective standards must be substituted for these subjective factors to a greater degree than heretofore.—*M. O. Wilson* (Oklahoma).

1727. Miller, E. *Temperamental differences in the behavior disorders of children*. *Brit. J. Educ. Psychol.*, 1933, 3, 222-236.—On temperament traits of mobility, prudence, and persistence ratings were made for 116 children, ages 6 to 15, referred to a child guidance clinic on account of behavior disorders. Ages, Stanford-Binet IQ's and performance test scores were available for comparisons. Mean square contingency coefficients between these ratings, also with sociability, impulsiveness, and presence of subjective or objective behavior symptoms are given. There were found indications of the existence of two fairly circumscribed reaction types: (1) the mobile—impulsive, sociable, frustrating rebellious type; and (2) the atonic—low impulsive, asocial, psychoneurotic child.—*K. M. Cowdery* (Stanford).

1728. Nacht, S. *Les troubles de la vie sexuelle*. (Disorders of the sexual life.) *J. méd. fr.*, 1933, 22, 109-115.—This is a study of inversion, exhibitionism, and fetishism. For each perversion there are two kinds of perverts: those who are stable in their perversion and do not suffer, and the neurotics who do not accept their perversion and who have more or less conscious remorse. It is in the latter case that psychoanalytic treatment is possible.—*M. H. Piéron* (Sorbonne).

1729. Sarró, R. *Sobre algunes dificultats de la caracterologia*. (Some difficulties of characterology.) *Rev. de psicol. i ped.*, 1933, 1, 328-333.—In the child the discoveries of the "I" and the "you" differentiate simultaneously and react on each other. The tendency to accumulate characterological experience is found throughout historical time and at all cultural levels. This interest is demonstrated by the abundance of characterological terms in all languages, which, if transformed into explicit interpretations by

analysis of the literal significance of the words, might give valuable knowledge of comparative characterology. A characterology may be constructed from different viewpoints. Sarró reviews the inductive and statistical approach as illustrated by Heymans and Wiersma's differential psychology. The sources of error lie in its external "inventory" nature; the inevitable moral accent; the plurality of motivations; the impossibility of self-analysis; and the fact that it presupposes as proved the very questions which it raises.—*M. E. Morse* (Catonsville, Md.)

1730. Stockhammer, M. *Max Stirners nervöser Charakter*. (The nervous character of Max Stirner.) *Int. Zsch. f. Indiv.-psychol.*, 1933, 11, 316-329.—Presents for study a long array, in wide variety, of conflicts and contrasts between the actual life and the philosophic views of Stirner, a German philosopher of the middle of the 19th century. Biographies, critical reviews, and the philosopher's own writings are the sources used. He apparently shows many of the startling contradictions revealed by Nietzsche also. Of frail body, he is lusty for strife. Showing but little courage in real life, open to strong suspicion of malingering and procrastination, he calls for the daring, undertaking, all-conquering life. His brilliance as a writer, extraordinary ability to crystallize epigrammatic expressions, to find unusual and telling metaphors and symbolisms, render his works enjoyable. These factors carry his readers along over glaring self-contradictions and futile denials and affirmations in the formulations of his inadequate principles of life.—*O. N. de Weerd* (Beloit).

1731. Weinberg, D. *Une méthode de détermination du caractère*. (A method for the determination of character.) *Bull. Inst. nat. orient. prof.*, 1933, 5, 173-178.—The author has secured coherent information on the personality of children by having the children interrogate each other. On 73 girls and 127 boys of an average age of 11½ the author has attempted to evaluate the following traits: intelligence, gaiety, courage, goodness, sincerity, honesty, modesty, sympathy, calmness, perseverance, sensibility, expansive character, affectionateness, and capacity for direction. Coefficients of agreement are given for the different traits.—*M. H. Piéron* (Sorbonne).

1732. Wolff, W. *The experimental study of forms of expression*. *Character & Personality*, 1933, 2, 168-176.—A study of personality is attempted in which each subject observes impersonally his own forms of expression which, unknown to him, have been detached and reproduced objectively. These forms may include voice, gait, handwriting (mirrored) and photographs of hands, profile and full face view (two views of the same half, one view the reverse of the other). It is concluded that self-judgment is more detailed and goes deeper into the personality, is tinged with emotion and tends to exaggerate the good or the bad in the self and to idealize. Furthermore, this idealization expresses subconscious wishes of the subject.—*M. O. Wilson* (Oklahoma).

[See also abstracts 1563, 1640, 1643, 1651, 1668, 1675, 1762, 1782, 1792, 1803, 1871, 1873, 1874.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

1733. Achille-Delmas, F. *Psychologie pathologique du suicide*. (The pathological psychology of suicide.) Paris: Alcan, 1933. Pp. 238. Fr. 30.—The author, a partisan of the pathological point of view, declares that 90% of suicides are cyclothymic and 10% are hyper-emotional. Only in 15% of the cases do social factors enter, and then only secondarily. The following definition is given in the ninth chapter: In suicide death is a means, a goal, and an end. It is a choice of death, deliberate, lucid, and premeditated. It is in effect the act by which a lucid man who might choose to live nevertheless chooses to die without any ethical necessity for the choice. The book is divided into two parts. The chapters of the first part are devoted to the criticism of the sociological thesis and to the impossibility of using statistics because of the errors in reporting cases and because, with large numbers of cases, the complexity of the facts is overlooked. The second part of the book deals with the psychopathology of suicide. After distinguishing between true and pseudo-suicide, the author declares that there is an incompatibility between true suicide and a normal emotivity. The prophylaxis for suicide is essentially medical.—*M. H. Piéron* (Sorbonne).

1734. [Anon.] *Blood groups and racial relationships*. *Nature*, 1933, 132, 524.—Coastal Indians of British Columbia usually have blood group O and only occasionally have blood group A (14% of cases), a result which seems to indicate that emigration from Asia to America must have ceased before the populations in Asia from whom the Indians were presumably derived became impregnated with A and B. A possible explanation is offered in the suggestion that the American Indians are derived from a race the remnants of which are certain native tribes living in the group of islands and archipelagoes along the eastern Asiatic coast.—*E. H. Kemp* (Clark).

1735. Atwood, B. S. *Social participation and juvenile delinquency*. *Ind. Bull. Char. & Correct.*, 1933, No. 210, 208-211.—Matched groups of 100 delinquent and 100 non-delinquent boys 12 to 16 years of age were scored on their participation in social activities. There was an increase in the participation rating with age in the delinquent group. At every age except 12 years the delinquents had a higher rating than the non-delinquents.—*C. M. Louttit* (Indiana).

1736. Barke, E. M. *A study of the comparative intelligence of children in certain bilingual and monoglot schools in South Wales*. *Brit. J. Educ. Psychol.*, 1933, 3, 237-250.—Non-verbal and verbal tests of intelligence given to 354 pupils in three schools using Welsh in the infants' department with English gradually introduced thereafter as the medium of instruction, and to 302 pupils in two schools where English was the dominant language, gave results indicating that the children in the monoglot schools are clearly superior on the verbal test, but that a slight advantage rests with the bilingual schools on the non-verbal tests. When subdivided the results

are the same by age groups and, though less consistent, for sex groups. The boys as a whole are distinctly superior to the girls on the non-verbal test, possibly due to emotional reactions to the materials used. Teachers' estimates of intelligence give correlations averaging .453 with verbal test and .282 with performance test. Retests after a year show higher reliability for the verbal than for the non-verbal tests.—K. M. Cowdery (Stanford).

1737. Beth, K. *Glaube und Unglaube*. (Belief and disbelief.) Dresden: Ungelenk, 1933. Pp. 103. 4M.—The published treatises deal with child religious psychology and include the works of Berguer (*Der Heilsgedanke in der Gegenwart*), Beth (*Der Kongress und die religionspsychologische Lage*), Clavier (*Der Verantwortlichkeit der Gläubigen für die Bildung des Unglaubenskompleses*), Körber (*Die seelische Not des jungen Religionslehrers*), Lindworsky (*Denkpsychologische Faktoren bei der Entstehung und Erstarkung von Glaubensschwierigkeiten*), Römer (*Verlust des Kinderglaubens*), Schneider (*Die Widerstände des Studenten gegen Religiöses*).—E. H. Kemp (Clark).

1738. Beyle, H. C. A scale for the measurement of attitude toward candidates for elective governmental office. *Amer. Pol. Sci. Rev.*, 1932, 26, 527-544.—An attitude scale of 57 items is presented.—R. S. Uhrbrock (Procter & Gamble Co., Ivorydale, Ohio).

1739. Beyle, H. C. The editor votes. *Amer. Pol. Sci. Rev.*, 1933, 27, 597-611.—Approximately one month before the 1932 presidential election, straw ballots containing 57 scaled items were mailed to 520 editors in towns having a population of 30,000 or more. 80 submitted usable ballots. The results were analyzed item by item. A comparison of editor's opinions with actual election returns led to the conclusion, "Clearly an editor's degree of affect is no index of how his community will vote."—R. S. Uhrbrock (Procter & Gamble Co., Ivorydale, Ohio).

1740. Beyle, H. C., & Parratt, S. D. Measuring the severity of the third degree. *J. Crim. Law & Crimin.*, 1933, 24, 485-503.—A scale of 50 items, constructed by means of the Thurstone technique, is presented. Data were gathered from 56 New York state troopers, 50 prisoners and 100 citizens of normal status. Each third-degree method was analyzed as it related to such acts as murder, burglary, embezzlement, assault and battery, bootlegging.—R. S. Uhrbrock (Procter & Gamble Co., Ivorydale, Ohio).

1741. Blondel, C. *Le suicide*. (Suicide.) Strasbourg: Lib. Univ. D'Alsace, 1933. Pp. 134.—The author emphasizes the need for considering both sociological and pathological points of view. In the first chapter he defines suicide as "any case of death which results directly or indirectly from a positive or negative act performed by the victim himself, an act which is known by the victim to produce such results." The second chapter discusses the two moral ways of evaluating suicide. The third and fourth chapters present the psychiatric and sociological conceptions of suicide. The two following chapters outline the views of Durkheim and Halbwachs. In the last

two chapters the author criticizes these views and presents his own.—M. H. Piéron (Sorbonne).

1742. Bogardus, E. S. Social distance in Shakespeare. *Sociol. & Soc. Res.*, 1933, 18, 67-73.—A social distance interpretation of *Much Ado About Nothing* throws light on many social distance concepts and suggests laws of social distance.—J. R. Hilgard (Stanford).

1743. Bryk, F. Voodoo-Eros. Ethnological studies in the sex-life of the African aborigines. (Trans. by M. F. Sexton.) New York: (Privately printed), 1933. Pp. 251. \$6.00.—Semi-popular account of sex practices among various African tribes, primarily of the Bantu and semi-Hamite groups. Illustrated. No bibliography.—D. Shakow (Worcester State Hospital).

1744. Buschke, A., & Jacobsohn, F. Sex habits; a vital factor in well-being. (Trans. by Eden and Cedar Paul.) New York: Emerson Books, 1933. Pp. 204. \$2.50.—R. R. Willoughby (Clark).

1745. Caldwell, M. G. Recent trends in juvenile delinquency. *J. Juv. Res.*, 1933, 17, 179-190.—The report concerns 341 juvenile delinquents who appeared before the Juvenile Court of Richland County, Mansfield, Ohio, during the period from 1923 to 1932, inclusive. Stealing was the principal offense for the boys, sex offense for the girls. The group differs from most similar ones described in the literature in that it tended to be younger (the modal age was 15 years); only 29% of its members came from broken homes; as many as 68% had completed the seventh grade; very few came from families any member of which had an institution record or showed socially defective tendencies; and first offenders and those who had had no previous institution records constituted as much as 85% of the total. Urban communities contributed a proportionally larger number of individuals to the group than did the rural. Foreign born, native born, negro, Catholic, Protestant, and Jewish groups seem to contribute only in the proportion in which they occur in the population. Of the delinquents 42% were sent to a correctional school—a frequency the author thinks too high in view of the large number of first offenders involved.—H. L. Koch (Chicago).

1746. Case, C. M. Leadership and conjuncture. *Sociol. & Soc. Res.*, 1933, 17, 510-513.—Theoretical discussion of the hypothesis that the conjuncture of personality traits, social situation, and event determines leadership. By application of this principle to the careers of famous individuals, tests of it are now in progress.—J. R. Hilgard (Stanford).

1747. Chandler, A. R. A bibliography of experimental aesthetics, 1865-1932. *Ohio State Univ. Stud., Bur. Educ. Res. Mimeographs*, 1933, No. 1. Pp. iii + 25.—A bibliography in which "a few of the more important references are marked with an asterisk."—P. R. Farnsworth (Stanford).

1748. Crook, E. B. Cultural marginality in sexual delinquency. *Amer. J. Sociol.*, 1934, 39, 493-500.—Sociologists conceive of the person as in part created by his social world. An attempt is made to explore

this concept by discovering the relations of marginal location (in space and culture) and mobility (physical and social) of the person to accompanying factors such as changes in personal relations and in his estimate of himself. Juvenile court records furnish data basic to a purely preliminary ecological study. The addresses of 700 "sexually delinquent" girls, those of their male partners, and their places of sex relations, when spotted on maps, form six different triangular configurations. The first three of these (200 cases) are here presented from the standpoint of their position in relation to boundaries of community areas and to boundaries of language areas. About half of the total fall on community frontiers, but over 86% on boundaries of language areas. Tentative hypotheses emerge, but intensive interpretation must await examination of cultural and personal aspects not treated in the preliminary study.—(Courtesy *Amer. J. Sociol.*)

1749. Droba, D. D. Topical summaries of current literature: social attitudes. *Amer. J. Sociol.*, 1934, 39, 513-524.—A review of 104 articles and books.—(Courtesy *Amer. J. Sociol.*)

1750. Duncan, O. D., McClure, J. H., Salisbury, J., Jr., & Simmons, R. H. The factor of age in marriage. *Amer. J. Sociol.*, 1934, 39, 469-482.—The predominating age at which persons of each sex enter into marriage is a highly important factor in determining the potential natural increase of the population. Most marriages in a rural population occur from two to three years earlier than in a city population. Objectively it is difficult to defend any age relationship that does not appear as a predominating tendency in the actual behavior of the group. The cultural heritage of a group probably determines more than anything else what its marital standards regarding age will be.—(Courtesy *Amer. J. Sociol.*)

1751. Earthy, E. D. Valenge women; the social and economic life of the Valenge women of Portuguese East Africa. New York: Oxford, 1933. Pp. 259. \$10.00.—R. R. Willoughby (Clark).

1752. Ellwood, C. A. The use and limitations of the statistical method in the social sciences. *Scient. Mo.*, 1933, 37, 353-357.—It is rarely possible to discover in social statistics correlations that are universal, because social phenomena are historical cultural products varying independently.—J. F. Dashiell (North Carolina).

1753. Emerson, R. W. Ueber Kompensation. (Compensation.) *Int. Zsch. f. Indiv.-psychol.*, 1933, 11, 282.—Translations of two short paragraphs from Emerson's essay on compensation. "All infractions of love and equity in our social relations are speedily punished," and "All the old abuses in society . . . are avenged in the same manner." No references or comments.—O. N. de Weerd (Beloit).

1754. Gemelli, A., & Pastori, G. Elektrische Analyse der Sprache. II. Untersuchungen über die Gestaltung der Wörter und Phrasen. (Electrical analysis of language. II. Investigations of the formation of words and phrases.) *Psychol. Forsch.*, 1933,

18, 191-217.—This study made it possible to investigate the behavior of the human voice without separating the single sounds, as has previously been the case, thus obtaining a graphically exact picture of the entire word in its true complex whole. Oscillograms were obtained on sensitive photographic paper. The old ideas, gained by studying syllables and sentences separately, do not hold when studied by this method. There are neither words nor phrases, but only a series of movements which present unities of different degrees. The Gestalt character of the human word is not fixed; it fluctuates back and forth, and can be changed. These groups of Gestalten make up the language and give meaning to thought. Therefore language is also ruled by Gestalt laws. Many of the records are included in an appendix. Bibliography.—J. F. Brown (Kansas).

1755. Hankins, F. H. Research in social biology. *Sociol. & Soc. Res.*, 1933, 17, 514-518.—The essence of method in social biology is the description of the associations of some physical trait with socially significant phenomena. No new methods have been evolved since the work of Galton, Ammon, and Lapouge. Advances have consisted mainly in the perfection of measuring scales and in the methods of manipulating results. Discussion and examples are given of the type methods of research in social biology: (1) the case method; (2) twin comparisons and foster-child comparisons; (3) family histories and pedigrees; (4) group studies by statistical techniques.—J. R. Hilgard (Stanford).

1756. Hartgenbusch, H. G. Untersuchungen zur Psychologie der Wiedererzählung und des Gerüchtes. (Investigations of the psychology of the repetition of material and of rumor.) *Psychol. Forsch.*, 1933, 18, 251-285.—W. Stern in 1902 made a study of divergencies in reporting evidence. This investigation follows Stern's method but handles the problem in more detail. The writer wishes to investigate the changes that take place when an individual repeats a story. Sentences were read and the subjects were required to write down immediately what they heard. This procedure was continued until 25 reports were obtained from different subjects, which made a series. No subject took part in more than one series of the same sentence. Omissions and changes were noted. It was found that the central parts of a report remain relatively constant. The central part of the report is judged by the experimenter as the essential idea. Things on the periphery are more labile, and are either omitted or made more "prägnant." The more labile part in a report or rumor is changed more easily, although the central part can also be changed.—J. F. Brown (Kansas).

1757. Hu, I. The time aspect in the habit of writing Chinese characters. *Stud. Psychol. Lab., Instit. Educ. Res., Nat. Sun Yatsen Univ., Canton, Series A, No. 2.* Pp. 54 (Chinese section, detailed). Pp. 7 (English section, brief).—The experiments aim to determine the speed of writing different Chinese characters and strokes, with special reference to the influence of the stage of maturity on the writing habit.

11 graduate students (Chinese) in the University of Chicago, all over 25 years of age, and 56 pupils in the experimental elementary and junior high schools of Sun Yatsen University, whose age varied from 8 to 15, served as two groups of subjects. The experimental procedure for both groups is identical, and all subjects wrote the same eight Chinese characters in the identical manner. From the kymograph records, the time spent for each stroke and for each character can be determined easily. The results show that beginners usually take more time to write any given character, and that variability also decreases with growth. Within every grade, the time spent for a given character is partly determined by the number of strokes it contains. It is evident that for any stroke, as is the case for any character, maturity in the habit manifests itself in less time spent and in a small range between the slow and fast stroke. It may also be noted that compound strokes as a rule take more time, and the points the least. Horizontals are written more slowly than verticals. Obliques to the right are slower than obliques to the left. A sample of the words written by a third-grader and a first-year junior high school student, together with a picture of the record on the kymograph, are given. There are altogether 8 figures and 22 diagrams.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1758. Jameson, A., & Jameson, S. H. Musical therapy in social control. *Sociol. & Soc. Res.*, 1933, 17, 535-544.—Musical therapy, in spite of its long and often successful practice, has not been systematically and scientifically utilized in our culture.—*J. R. Hilgard* (Stanford).

1759. Kucharski, P. Characteristic intervals of English vowels. *Nature*, 1933, 132, 752.—Vocal quality bears no relationship to absolute tonal pitch. The timbre of vowels is likely to depend (approximately like that of instruments) upon the ratio of intensities presented by partial tones which occupy in the harmonic series relative but constant positions. Any vowel is primarily characterized by a constant interval between two tones corresponding in natural speech to front and back resonances. The double-resonance theory of Paget receives corroboration.—*E. H. Kemp* (Clark).

1760. Kulp, D. H. The form of statements in attitude tests. *Sociol. & Soc. Res.*, 1933, 18, 18-25.—Many "attitude" tests contain not only attitude items but also a mixture of belief, judgment, opinion, and fact items. When 24 items from several existing attitude tests were changed into 4 forms (belief, judgment, attitude, and fact), with the content kept constant, results from 180 students indicated that attitude tests should contain statements of the same type and form.—*J. R. Hilgard* (Stanford).

1761. Kutak, R. L. The story of a Bohemian-American village; a study of social persistence and change. Louisville, Ky.: Standard Pr. Co., 1933. Pp. 172. \$2.00.—A study of the problem of the adjustment of the Czech immigrant to American life, made in Milligan, Nebraska.—*R. R. Willoughby* (Clark).

1762. Ladd, M. R. The relation of social, economic and personal characteristics to reading ability. *Teach. Coll. Contrib. Educ.*, 1933, No. 582. Pp. vii + 100.—"Group tests of silent reading, intelligence (verbal and non-verbal), socio-economic status, play interests, personality, and school attitudes were given to 315 children in grades 3B, 4A, 4B, and 5A of three public schools of New York City." No marked relationships were found between reading ability and socio-economic status of the home or play interests or general personality adjustment. The correlation between the reading age (3 tests) and the Haggerty Delta 2 intelligence test was .71; r was .24 between reading age and the Pintner non-language mental test. The background of the problem and a discussion of the factors commonly thought to be associated with reading ability are given. Good and bad readers are compared. A few case studies are given. The bibliography lists 106 titles.—*J. M. Stalnaker* (Chicago).

1763. Landsberg, P. L'homme et le langage. (Man and language.) *Rev. phil.*, 1933, 58, Nos. 3 & 4, 217-251.—Translated from the German by H. Jourdan.—*M. H. Piéron* (Sorbonne).

1764. Lorimer, F., Dublin, L. I., & Engle, E. T. Discussion of the differential fertility of social classes. *Soc. Forces*, 1933, 12, 39-47.—(Courtesy *Bibliographia Eugenica*).

1765. McDougall, W. Family allowances as a eugenic measure. *Character & Personality*, 1933, 2, 99-116.—In western civilizations the operation of the prevailing social system sifts the population into a social scale in which the more capable individuals, physically, morally, socially, tend to rise to or remain at the top while the less capable tend to sink to or remain at the bottom of this scale. But the birth rate is and has been for generations increasingly low among the higher classes. One condition responsible for this low birth rate in the upper classes is our present dysgenic system of family allowances, that is, according to a flat rate. What is needed is a eugenic system in which the allowance per child is proportional to the wages or salary of the parent.—*M. O. Wilson* (Oklahoma).

1766. Meerlo, A. M. Ueber die Beurteilung der Selbstmordneigung. (On the judging of tendency toward suicide.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1933, 143, 222-243.—In this lecture an attempt is made to picture the tendency toward suicide, from both subjective and objective points of view. The clinician seeking to understand such a tendency must be able to transplant himself into the affective world of the subject. He must distinguish between the deep-lying causes and the secondary motivation which the subject may report. The phenomenological schema of Schneider is useful in this field. Bibliography.—*C. W. Fox* (Rochester).

1767. Mira, E. La nova concepció experimental de la conducta moral. (The new experimental conception of ethical conduct.) *Rev. de psicol. i ped.*, 1933, 1, 229-251.—Mira describes his tests of ethical judgment: "conjugal infidelity" (conflict between primitive and acquired tendencies); "professional

ethics" (discrimination); "blood transfusion" (motivation); and "criteria for punishment of crime." The results showed a multiplicity of criteria and motivations and proved that ethical behavior is determined essentially by affective impulses. Mira then develops his generic theory, viz., all ethical attitudes are derived from fear, rage or love. The ethical aspect of the first is the primitive external morality of prohibition and discipline; of the second, the attitude of destruction, revolution and utilitarianism; of the third, the adult, cosmic attitude of cooperation, possible only when the vital needs are satisfied. Thought raises the primitive automatic mechanisms to the plane of ideals. The author traces successive development of these attitudes in normal, psychopathic and antisocial individuals, in races, and in nations.—*M. E. Morse* (Catonsville, Md.)

1768. Miyake, S. "Mikrographie" no kenkyu. I. (Studies on micrography. I.) *Seirigaku Kenkyu*, 1933, 10, 553-570.—The author is himself a record-holder of micrography: at present he can write 1000 Chinese characters within a space of 1 cm.² in 2 or 3 hours, and 100 Japanese poems (of 31 syllables each) with gorgeously colored portraits of their poets (eyes and nose being included) within a space of a square of 15 mm. in about 5 hours. He tried to analyze its psychophysiological mechanism under the guidance of Ishikawa of Kyoto Imperial University. (The author is a physician and a graduate of the university.) He concludes in his summary: the secrets of micrography rest on (1) the fixation of the tip of a writing brush, (2) the diminution of friction between the brush tip and paper, and (3) the touching of the brush with paper with as sharp a point as possible; the brush itself must contain an ample quantity of ink.—*R. Kuroda* (Keijo).

1769. Miyake, S. "Mikrographie" no kenkyu. II. (Studies on micrography. II.) *Seirigaku Kenkyu*, 1933, 10, 571-594.—In micrography the fixation of a writing brush comes principally from a visual fixation of its tip, which necessarily gives rise to minute involuntary rhythmic movements of the writing hand itself. Voluntary movements to draw a straight line for instance on the other hand must invariably meet with a reverse. The minute involuntary movements accompanied by centripetal tactual and kinesthetic excitation are an essential factor in micrography and there is no room to assume some supernatural mystical force underlying it.—*R. Kuroda* (Keijo).

1770. Pear, T. H. *The psychology of effective speaking*. London: Kegan Paul, 1933. Pp. xiii + 232. 6s.—Speaking, because of modern developments in voice transmission, is no longer limited by time and space; it is therefore acquiring more and more social importance. The author considers some of the psychological problems of speaking as distinguished from either speech or language. He gives an account of effective speaking, paying particular attention to broadcasting. Humor is discussed, and the resemblances and differences between clothing and speaking. Suggestions are made for increasing the effectiveness of speaking in schools and universities, and

many questions which to the student of elocution may seem finally settled are treated from a psychological point of view.—*C. V. Hudgins* (Clarke School).

1771. Popenoe, P. Divorce and remarriage from a eugenic point of view. *Social Forces*, 1933, 12, 48-50.—The author procured information concerning slightly more than 1000 remarriages of divorced persons, only those marriages being taken which had lasted at least five years. The subjects were chosen from all parts of the United States and belonged to the normal, educated part of the population. The question of happiness of these marriages was rated by close friends or relatives, nearly two-thirds of them being considered happy. A tabulation of 10,000 other marriages showed that about 70% of those of five years' duration for the same class of subjects were rated as happy.—*A. B. Hunter* (Clark).

1772. Popenoe, P. Can the family have two heads? *Sociol. & Soc. Res.*, 1933, 18, 12-17.—*J. R. Hilgard* (Stanford).

1773. Porteus, S. D. Human studies in Hawaii. Pacific problems. *Proc. & Lect., School of Oriental & Pacific Affairs, Univ. Hawaii*, 1932, 82-114.—The report of an investigation on race differences, conducted at the University of Hawaii under a grant from the Rockefeller Foundation. The complete investigation was divided into sections on physical anthropology, psychology, and sociology; this report covers the work of the first two sections. In collaboration with F. Wood Jones, the present writer made an attempt to determine the fundamental differences between man and his most closely related anthropoid contemporaries as a preliminary step to the solution of the problem of the pathway of his emergence from lower evolutionary levels. While the greater part of the findings of these investigators has been presented in the form of a number of books and earlier reports, the present report summarizes and furnishes a complete bibliography.—*E. H. Kemp* (Clark).

1774. Reichard, J. D. The intelligence of the prospective immigrant. 1. A study of the mental ability, measured by language and non-language tests, of applicants for immigrant visas at Warsaw, Poland. *U. S. Pub. Health Bull.*, 1933, No. 206. Pp. 35.—A group of 494 subjects, male and female, Slav and Jew, without gross physical or mental defect, between the ages of 15 and 45 were given 19 different mental tests, both language and non-language. Tables are given of the performance on each of these, as well as the system of point scoring used. Language and non-language scales were formed from the individual tests. Differences found by both scales were associated with sex, schooling and age. There were no race differences. The greatest differences on the non-language test were between sexes, although these differences are probably due to the different social status of the sexes. On the language tests the greatest differences were found between the no-schooling group and those who had been to school. Age differences indicate that the older groups tend to give poorer results on both scales. There are two supplementary

mimeographed publications: (1) *Manual* (30 pages) giving directions for each test and tables of norms; (2) *Supplement* (34 pages) giving 36 tables of the detailed score distributions for each test.—C. M. Louttit (Indiana).

1775. Resnikoff, P. A psychoanalytic study of lynching. *Psychoanal. Rev.*, 1933, 20, 421-427.—The author sees in lynching a way for whites to unburden themselves of the guilt generated by the Oedipus complex. "Lynching is a sexual attack on the negro, an attack whose sadistic nature is unmistakable."—D. Shakow (Worcester State Hospital).

1776. Schmidt, E. Neurose, Verbrechen und Hochstaplerium. (Neurosis, criminality, and swindling.) *Int. Zsch. f. Indiv.-psychol.*, 1933, 11, 283-295.—The article develops the thesis that gradiose tendencies commonly lie at the base of much neurotic and criminal behavior. A mark of distinction between them is found in that the criminal is conscious of his attitude of social enmity, the neurotic is not. The criminal lacks a courageous attitude toward life and characteristically fails to meet social demands and obligations. The swindler is peculiar in that he pretends to a rank or station in the social order for which he has no intention of rendering equivalent value in any form. The swindler is also a swaggerer. In corrective treatment of both criminals and swindlers, it is important to realize that the desire for social dominance rather than economic gains is the real motive in their conduct. An illustrative case is presented in some detail.—O. N. de Weerd (Beloit).

1777. Schoen, M. Art and beauty. New York: 1932. Pp. 230.—R. R. Willoughby (Clark).

1778. Scripture, E. W. Analysis and interpretation of vowel tracks. *J. Acous. Soc.*, 1933, 5, 148-152.—A method for analyzing speech records and expressing them in numerical form is presented. The method consists in breaking a vowel track, for example, up into "speech bits" characterized by some recurrent phenomenon. These "bits" are then analyzed as to their profile forms and durations. Numerical values are given for: duration of the vowel; number, duration, and repetition of "bits"; and for various frequencies. On the basis of speech records, attempts are being made to develop a science of personality.—P. E. Huston (Worcester State Hospital).

1779. Scripture, E. W. Macrophonic speech. *Nature*, 1933, 132, 138.—Physical speech includes currents of air from the mouth and nose that are dissipated immediately in front of the face. These currents can be captured and registered by the graphic method. Registrations of this kind, of which a sample is presented, show that the currents of air form a system of speech activity of the completest kind. It is called by the author "macrophonic speech" and is said to be the immediate result of the muscular action of the speech organs. The vibrations that constitute "microphonic speech" are said to be the results of macrophonic speech.—E. H. Kemp (Clark).

1780. Scripture, E. W. A sound track of the vowel ah. *Nature*, 1933, 132, 486-487.—E. H. Kemp (Clark).

1781. Scripture, E. W. Diagnosis by sound tracks. *Nature*, 1933, 132, 821-822.—The method of diagnosis by sound tracks introduced by Janvrin provides not only for diagnosis of certain nervous diseases with great accuracy, but also for the expression of the signs of the diseases in numbers obtained by measurement. The frequency of laryngeal vibration may be determined from the records, and deviation from the normal measured as a percentage. The determination of laryngeal tasia thus becomes a quantitative one.—E. H. Kemp (Clark).

1782. Selling, L. S. Psychopathology without functional change as shown in a delinquent group. *J. Juv. Res.*, 1933, 17, 153-162.—100 automobile thieves, 12 to 17 years old, who were serving a term in a state correctional institution, were compared with 100 delinquents selected at random from the inmates of the same institution, as well as with a group of non-delinquent children. The auto thieves came largely from urban territory and from an area in that territory near the business district. This area has a high delinquency rate. The incidence among the thieves of broken homes, unemployed fathers, and poor parental supervision is high. While the truancy rate in the group is impressive, it is not so considerable as in the case of delinquents generally. The auto thieves' group, while including none whose IQ's were above 112, had only 11 members whose IQ's fell below 80. This the author feels excludes the intellect factor as a significant determinant of the delinquency. Little evidence, moreover, of emotional abnormality as a determinant was uncovered. Lack of access to an auto, on the other hand, and a strong desire to have a car "just to ride around in" did seem to characterize the auto thieves to a greater extent than the other groups.—H. L. Koch (Chicago).

1783. Serouya, H. Le problème philosophique de la guerre et de la paix. (The philosophical problem of war and peace.) Paris: M. Rivière, 1932. Pp. 204.—In the psychological section of the book, the author seeks to determine whether or not the tendencies, desires, and needs of men are such that war is necessary.—M. H. Piéron (Sorbonne).

1784. Shenton, H. N. Cosmopolitan conversation; the language problems of international conferences. New York: Columbia Univ. Press, 1933. Pp. 821. \$7.50.—R. R. Willoughby (Clark).

1785. Spaulding, C. B. Types of junior college leaders. *Sociol. & Soc. Res.*, 1933, 18, 164-168.—Case studies of 16 student leaders in a junior college suggest five possible types: the social climber, the intellectual success, the good fellow, the big athlete, and the athletic-activity type. These types are described and characterized.—J. R. Hilgard (Stanford).

1786. Steinbaum, J. [Juvenile delinquents among immigrants.] *Unser Shul*, 1933, 3, No. 8, 3-8.—A criticism of C. P. Armstrong's study of delinquent children (*School and Society*, July 8, 1933).—D. Shakow (Worcester State Hospital).

1787. Stirling, M. W. Jivaro shamanism. *Psychoanal. Rev.*, 1933, 20, 412-420.—An exposition of various of the important functions performed by the

shaman or *wishinu* of the Jivaro Indians of Eastern Ecuador and Peru.—D. Shakow (Worcester State Hospital).

1788. Tang, H. C. Hygiene of the printing of reading matter. *Chung Hwa Educ. Rev.* (Chinese), 1933, 20, 35-46.—This paper reviews the studies on the hygiene of the printing of the reading matter. Experimental results are cited from both Chinese and western sources. The discussion covers the following topics: (1) size of the printed words, (2) space between the lines, (3) length of the lines, (4) color and thickness of the paper, (5) system of punctuation, (6) paragraphing, (7) horizontal and vertical arrangements, (8) size of the book, (9) width of the margins, (10) amount of the pictorial illustrations, and (11) color of the cover page of the book, etc.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1789. Thompson, C. J. S. The hand of destiny. The folklore and superstitions of everyday life. London: Rider & Co., 1933. Pp. 303.—A description without explanation or generalization of about 1500 superstitions. These are listed under 25 chapter headings such as: birth, childhood, courtship, marriage, evil eye, face, apparel, death, sailors, animals, amulets, numbers, drinking, games, etc.—O. W. Richards (Yale).

1790. Vance, R. B., & Wynne, W., Jr. Folk rationalizations in the "unwritten law." *Amer. J. Sociol.*, 1934, 39, 483-492.—The conflict between folk ways and state ways in the "unwritten law defense" clearly shows opposing folk and legal rationalizations. The legal doctrine of agency has given way before the folk view at three points: (1) by an abrogation of the paramour's common-law right of self-defense; (2) by statutory enactments which place justifiable homicide under the rule of "reason and justice"; and (3) by its enactment into law. Moreover, juries continue to free those who slay "in defense of the home" by substituting folk rationalizations for the law of the land.—(Courtesy *Amer. J. Sociol.*)

1791. Williams, H. D. A survey of pre-delinquent children in ten middle western cities. *J. Juv. Res.*, 1933, 17, 163-174.—The author attempted to get some light on the question of the frequency and characteristics of problem children. His data are the responses of the teachers in the school systems of 10 medium-sized cities to a check list designed to facilitate the reporting and describing not only of the children but also of some of the probable causes of their difficulties. Of 55,995 children surveyed, 1343, or 2.4%, were listed as pre-delinquent, the percentage in the different cities varying from 1.2 to 5.3, and in the different schools from 0 to 15. The problem children, while found at all age, grade, and intelligence levels, were most frequent among the thirteen-year-olds, the fifth-graders, and those with IQ's between 80 and 90. Of the pre-delinquents 97% were reported as socially maladjusted, 83% as maladjusted in school, 77% as living under unfavorable home conditions, 61% as attending school irregularly, and 46% as showing physical abnormalities. About four times as many boys as girls were listed, the pro-

portion being almost the same as that found in the juvenile court cases in the U. S. Pre-delinquent boys are described as resisting authority more, as engaging in more misconduct in school, and as annoying other children more than do the girls, whereas the latter are reported as the more subject to inferiority feelings, interested in sex, and over-developed physically.—H. L. Koch (Chicago).

1792. Young, H. T. P. Character in young delinquents. An approach from the criminal gang aspect. *Brit. Med. J.*, 1933, ii (3790), 390-392.—(Courtesy *Bibliographia Eugenica*).

1793. Xirau, J. El concepte de llibertat i el problema de l'educació. (The concept of liberty and the problem of education.) *Rev. de psicol. i ped.*, 1933, 1, 117-134.—The cultures of the ancient and medieval worlds were clearly defined and oriented and depended on adaptation to cosmic laws, human or divine. The concept of the inner life, glimpsed by Socratic philosophy, acquired social force only with the advent of Christianity, and only at the Renaissance did it become proudly conscious of its value. Today, however, the unitary consciousness of an oriented culture is gone, and there is a turning to a primitive naturalism which is ultimately the deepest foundation of barbarism. The central problem of contemporary European consciousness—and in its repercussion, of education—is to find a liberty in which personality is saved from primitive naturalism. Liberty is liberation from the empirical law of biological processes and submission to the immanent law of the individual norm. The educator's function is to help the individual discover his own destiny, to orient and guide him in it, and to secure spontaneous submission to his inner law.—M. E. Morse (Catonsville, Md.)

1794. Yourievitch, S. L'art et la vision. (Art and vision.) *Bull. Inst. gén. psychol.*, 1933, 32, 26-40.—A work of art in order to arouse sensations of agreeableness and beauty must be characterized by the search for the least effort. The essential elements of physiological esthetics are as follows: the dimensions of the illuminated areas and their mutual interrelations; their disposition in ellipsoidal curves; obtuse angles of relation and acute angles of contrast with reversals of direction; the use of complementary colors; and the application of the facts of color vision.—M. H. Piéron (Sorbonne).

[See also abstracts 1556, 1560, 1592, 1594, 1615, 1681, 1692, 1696, 1708, 1711, 1716, 1723, 1726, 1762, 1814, 1822, 1854, 1862, 1863, 1892.]

INDUSTRIAL AND PERSONNEL PROBLEMS

1795. [Anon.] Health in industry. *Nature*, 1933, 132, 699-701.—The report of the Chief Inspector of Factories and Workshops for 1932, the hundredth anniversary of the appointment of the first government inspectors of factories in Great Britain, is largely devoted to a historical review of the growth of the inspectorate from its modest beginnings to its present establishment. The summary here presented deals

with such things as the transformation in education, safety, and health of laborers.—*E. H. Kemp* (Clark).

1796. Azoy, A. *Estudio psicofisiológico de la profesión de piloto aviador*. (Psychophysiological study of the profession of aviation pilot.) *Rev. de psicol. i ped.*, 1933, 1, 271-297.—The only valid method for determining the aviator's qualifications is immediate observation during experimental flights. In this manner Azoy has studied himself and certain Catalonian military aviators. The aim of his research is "complete knowledge of the influence of the pilot on the flight and the flight on the pilot." Aviation belongs to the group of professions demanding intelligence of the predominantly spatial type; a perceptive-reactive character; perfect emotional control; and rapid, precise and stable motor reactions to different simultaneous stimuli. "Aviation aptitude" is a special psychosensory complex constituted of a minimal psychophysical integrity and power to combat the disturbing stimuli of the atmosphere and the flight per se. The aviator's sensory organ par excellence is the stato-kinetic sense. Examination of this, combined with tests of psychomotor reactions, dispersion of attention, fatigability, and emotional control comprise Azoy's professiogram. The article contains diagrams of the stato-kinetic reactions in various aviation situations; also a European bibliography.—*M. E. Morse* (Catonsville, Md.)

1797. Berens, C. *International visual standards for aviators*. *Amer. J. Ophth.*, 1933, 16, 403-405.—The author presents the international visual standards proposed by Onfray at the International Ophthalmological Congress held at Amsterdam, with additional suggestions proposed by himself.—*T. Karwoski* (Dartmouth).

1798. Courthial, A. *Un laboratoire de psychologie et d'orientation professionnelle au Service Social de la Caisse de Compensation de la région parisienne*. (A laboratory of psychology and vocational guidance in the Social Service of the Office of Compensation in the Parisian region.) *Bull. Inst. nat. d'orient. prof.*, 1933, 5, 117-127.—In addition to the Terman-Binet and the Piéron tests, the author uses the non-verbal tests of Grace Arthur, the box of Décroly, and the mechanical tests of Stenquist.—*M. H. Piéron* (Sorbonne).

1799. Drill, R. *Untersuchungen über den Hammerschlag*. (Researches on hammering.) *Neue Psychol. Stud.*, 1933, 9, 143-208.—The writer defines the optimal conditions for the activity of hammering. Besides this insight was also gained into the inner dynamics of the movements of hammering.—*O. Klemm* (Leipzig).

1800. Remmers, H. H., & Schell, J. W. *Testing the O'Connor Wiggly Block Test*. *Person. J.*, 1933, 12, 155-159.—The authors set up an experiment to obtain data on the reliability and validity of the Wiggly Block Test, using semester shop grades of 109 high-school students as the criterion for validity. The results showed that the test was too low in reliability to be used as a satisfactory tool for vocational guidance, but that within the reliability of the

measures used, the test has a high degree of validity as indicated by correlation with shop marks. Further experimentation designed to eliminate the serious weaknesses of the test is suggested.—*P. Seckler* (Radcliffe).

1801. Uhrbrock, R. S., & Richardson, M. W. *Item analysis: the basis for constructing a test for forecasting supervisory ability*. *Person. J.*, 1933, 12, 141-154.—Nine tests were presented to 163 supervisors in a large industrial organization, including intelligence, vocational interest, form board, personality, and company information tests. Personal history records, ratings on factors pertaining to the supervisors' duties, and a medical examination were also obtained. An analysis was then made to determine those items in the study which were significant in differentiating between the poorest third and the upper two thirds. Only 4 out of 15 personal history items, 85 of the 820 psychological and interest items, and no item included in the medical examination proved to be significant. The authors believe that the fact that unanalyzed tests may contain as much as 90% "deadwood" so far as a particular industrial problem is concerned is one of the reasons why industrial testing programs have failed in the past.—*P. Seckler* (Radcliffe).

1802. Walther, L. *L'orientation professionnelle vers les carrières libérales et ses bases psychologiques*. (Vocational guidance for liberal careers and their psychological bases.) *Rev. phil.*, 1933, 58, Nos. 7 & 8, 78-100.—Global intelligence is the determinant of success in a general and liberal career. Just the reverse of the trades, the liberal professions require general aptitudes for success, while special aptitudes are indispensable for the manual professions. Bibliography of 19 titles.—*M. H. Piéron* (Sorbonne).

[See also abstracts 1460, 1566, 1573, 1675.]

EDUCATIONAL PSYCHOLOGY

1803. Bourjade, J. *Plaidoyer pour la pédagogie du caractère*. (Defense of the pedagogy of character.) *Bull. Soc. Binet*, 1932, 32, 97-122.—The educator must force himself to evaluate character with respect to acquisition of powers which it lacks and to the development of powers with which it is endowed, seeking always for the factors making for equilibrium in originality.—*M. H. Piéron* (Sorbonne).

1804. Braddy, N. *Anne Sullivan Macy: the story behind Helen Keller*. New York: Doubleday, Doran, 1933.—*R. R. Willoughby* (Clark).

1805. Chang, T. S., & Yang, S. Y. *A psychological investigation of the teaching of nature study in the elementary schools*. *J. Child Educ.* (Chinese), 1933, 5, 197-204.—The teaching of nature study in the elementary schools falls, in general, into two main types, viz., (1) learning the functions of things, and (2) learning the names of things. The chief purpose of this investigation is to find out which one of these two ways of teaching is more economical. The materials collected for analysis include entrance examination papers, marks of the different school subjects, and the sum of marks in the entrance examinations

and entrance examination questions of a number of junior high schools of Kiangsu province. Statistical treatments are made. The results show that (1) describing the functions (and relationships) of things is easier to make pupils get a more vivid and deep impression than describing the names of things; (2) teachers are used to stress the description of the names of things, resulting in an uneconomical learning of nature study; (3) teaching of nature study in the elementary schools often neglects problems appropriate to the children's daily life; (4) correlation between the marks of nature study and the sum of all marks and that between arithmetic and language are real and obvious; and (5) the general tendency of the method of testing nature study is toward the completion method. From these findings the author draws some concrete suggestions for teachers of nature study.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1806. Chao, T. W. [A textbook of educational psychology.] Shanghai: Kai Ming Book Co., 1933. Pp. 229. \$.90 mex.—This textbook is written for the use of normal school students and is mainly based upon the Thorndikian theories of learning, supplemented with Watson's experimental results. The materials are freely compiled from the writings of Sandiford, Thorndike, Gates, Pintner, Starch, and Pechstein. It treats briefly the various problems of the two major parts of educational psychology, viz., the nature and development of the child and the learning process. A summary and some research problems are placed at the end of each chapter.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1807. Chên, C. Y. Toys and education. Shanghai: Commercial Press, 1933. Pp. 148. \$.45 mex.—Toys are important instruments for kindergarten education. The author first reviews the history and value of toys, then discusses the relationship between toys and the child, selection of toys, and the methods of using toys for educational purposes. He also gives a description of new educational toys of the modern time and of the various nations. There are 31 diagrams illustrating the educational toys devised by the Drum Tower Kindergarten, Nanking.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1808. Chinese Asso. for Child Educ. Special issue of the Third Annual Meeting of the Chinese Association for Child Education. *J. Child Educ.* (Chinese), 1933, 4, No. 10.—Chinese Association for Child Education has a history of 6 years and more than 1000 individual and institutional members. Its official organ is *Journal of Child Education*. Among the papers read at the sessions and reprinted here may be mentioned: (1) The ideal of health education, by H. T. Chêng; (2) The scope of mental hygiene, by C. T. Lui; (3) Mind and mental hygiene, by H. C. Chên; (4) Educational hygiene, by S. E. Hsü; and (5) Health teaching in the elementary schools, by K. T. Ma.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1809. Chu, C. I. [Educational testing and statistics.] Shanghai: Commercial Press, 1933. Pp. 262.

\$1.10 mex.—The first 6 chapters of this book deal with educational testing, giving many samples of tests. The later 7 chapters deal with statistics, illustrated with diagrams and figures. Chapter XII is specially devoted to a detailed description of the Chinese TBCF Test. Most of the statistical illustrations have practical uses for the elementary schools.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1810. Chu, Y. K. Some problems in a national system of education in China. Shanghai: Commercial Press, 1933. Pp. 394. \$3.00 mex.—This book, which is the author's dissertation at Columbia University, makes a comparative study of the Chinese educational system, considering its historical background and present status, with a reference to the developmental process of western education. It discusses the social purpose of education, distribution of educational opportunity, school system, educational administration, training of teachers, and other topics. Concrete suggestions are given for each of these problems.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1811. Cooper, J. A. The effect of participation in athletics upon scholarship measured by achievement tests. *Penn. State Stud. Educ.*, 1933, No. 7. Pp. 21.—From a study of the results on the Carnegie Foundation Advanced Achievement Test for 4,500 seniors in colleges of the State of Pennsylvania, the author concludes that the non-athletic group show a slight superiority in achievement over the athletic group.—(Courtesy *J. Educ. Res.*)

1812. Crooks, A. D. Marks and marking systems: a digest. *J. Educ. Res.*, 1933, 27, 259-272.—Discussion of the literature considered under such topics as the need and purposes of marks, their reliability, marking bases, the percentage system and ranking, use of normal curve, ability grouping, absolute standards. The general conclusion is that achievement is becoming recognized as the only logical basis for marking. Bibliography of 80 titles.—S. W. Fernberger (Pennsylvania).

1813. Davies, J. E. What are the traits of the good teacher from the standpoint of junior high school pupils? *School & Soc.*, 1933, 38, 649-652.—The author had 72 seventh-grade pupils write on the question of what traits they thought made a good teacher, in order to discover whether junior high school pupils were capable of succeeding with such an analysis. Of 500 traits mentioned in the papers, only 15, it was felt, educators might question. According to the traits named most frequently, the good teacher in the eyes of the pupils is kind, sympathetic, not cross or cranky, has a sense of humor, does everything possible to make her pupils understand, makes work interesting, is impartial and fair, and has good discipline.—H. L. Koch (Chicago).

1814. Döring, W. O. Psychologie des Bildungsgutes. (Psychology of the cultural products.) Leipzig: Dürr, 1933. Pp. 181. 4.20 RM.—For educational success it is necessary that the teacher take into account the structure of those cultural products which form the material of learning, and that the

pupil repeat the creative process which underlies these cultural products. The first chapter deals with the structure of cultural products, the second with the process of psychological creation (theoretical, esthetic, economic, religious, social, and pedagogical creations), the third with the psychic appropriation of cultural products, the fourth with appropriation and reproduction by the child and the adolescent.—*W. O. Döring* (Leipzig).

1815. Dupertuis, J. *Vers l'école unique*. (Towards the unique school.) Paris: Flammarion, 1933. Pp. 244. Fr. 12.—The author presents a picture of the great Viennese educational effort.—*M. H. Piéron* (Sorbonne).

1816. Frogner, E. *Problems of sentence structure in pupils' themes*. *English J.*, 1933, 22, 742-749.—An analysis of a large number of sentences written by pupils in grades 7, 9 and 11 shows an increasing use of complex and compound sentences with increasing maturity. Also, certain types of errors tend to disappear much more rapidly than others. The writer offers suggestions for the elimination of these persistent errors.—*S. M. Stoke* (Mount Holyoke).

1817. Fu, P. J. [Teaching of the elementary school subjects.] Shanghai: Ta Hwa Book Co., 1933. Pp. 186. \$.60 mex.—This book covers 2 parts consisting of 15 chapters. Part I discusses the following major topics: meaning and aim of teaching, teaching material, types of learning and the teaching method, forms of teaching, methods of teaching, and preparation of teaching. Part II discusses teaching methods for the elementary school subjects such as hygiene, physical exercise, (Chinese) language, social and natural sciences, arithmetic, handwork, art, and music. Questions for review at the end of each chapter.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1818. Haggerty, M. E. *Children of the depression*. *Day & Hour Ser.*, Univ. Minn., 1933, No. 6, 5-25.—A challenge to social vision which arises from the current crisis in education.—*S. H. Newman* (Clark).

1819. Hansen, W. *Beiträge zur pädagogischen Psychologie*. (Contributions to pedagogical psychology.) Münster: Münster Verlag, 1933. Pp. viii + 240. 2.80 RM.—The first part of the book contains the following contributions: W. Hansen discusses the modern theories of psychic development and the developmental phases of childhood and adolescence; he presents also his own theory of developmental phases. The second part deals with the psychology of school education: M. Muchow treats the kindergarten age (3-6 years), H. Hetzer the age of elementary school (7-11 years), D. Hauser the psychological situation of the higher classes of the secondary school (11-15 years), O. Tumlriz the psychology of students of occupational schools (15-18 years). The third part contains short articles about single problems of genetic psychology: H. Hetzer, the play of children; W. Hansen, the sculptural creations of children; K. Haase, social behavior in childhood and adolescence; M. Moers, moral development; B. Winzen, religious development; R. Allers, characterology of childhood;

M. Moers, sex differences of childhood and adolescence.—*W. Hansen* (Münster i. W.).

1820. Johnson, B. *Good writing*. Syracuse: Syracuse University, 1932. Pp. 76. \$0.50.—A discussion—"an inquiry into the efficacy of the teaching of written composition in American colleges; and a search for the criteria of 'good writing,'"—based upon the replies of business men, editors, writers, etc., to a request (which apparently contained suggestive statements) which is not included. Many quotations from the replies are given. "... I ... urge ... the great value of the testimony of those men and women whose letters are here assembled." An appendix of 12 pages lists additional quotations from the letters.—*J. M. Stalnaker* (Chicago).

1821. Kiang, H. Y. *Sixteen years of activities of the Chinese Association for Vocational Education*. *Educ. & Voc.* (Chinese), 1933, 146, 397-478.—This report is a record of the development and work of the Chinese Association for Vocational Education, summarized given in a number of statistical tables and figures. The main activities of the Association are, according to the author, (1) research (survey and compilation), (2) extension (lectures and planning), (3) experimentation (the work of the affiliated institutions), and (4) miscellaneous work.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1822. Lange, B. *Zur Psychologie des Zeichenunterrichts*. (Contribution to the psychology of teaching drawing.) *Int. Zsch. f. Individ.-psychol.*, 1933, 11, 295-301.—The writer's fundamental thesis is that creative art productions contain a confession, i.e., they reveal a goal or standard. Hence the training in production and appreciation is more than supervising efforts to imitate or copy. The recognition of the subjective character of the judgment of art values lays a greater responsibility upon the art teacher than formerly. Sketching should be developed as a natural form of self-expression. The individual should not be taught to compare his productions with those of ranking artists, nor should he be led by his efforts constantly to seek social recognition. The writer distinguishes two main stages in creative art development, pre- and post-adolescent. Each may be subdivided. The pre-adolescent efforts are characterized by greater freedom of imagination, less faithfulness to reality. Post-adolescent art by contrast is less daring, more intelligible, and more subject to self-criticism. The willingness to produce what must be recognized as mediocre works of art in contrast with the achievements of masters is a necessary trait if many more people are to enjoy drawing and profit by school instruction in the art.—*O. N. de Weerd* (Beloit).

1823. Lithauer, D. B. *A follow-up report of the later school progress of children of primary school age trained in an experimental kindergarten*. *J. Juv. Res.*, 1933, 17, 175-178.—A follow-up report is given on a group of 25 slow children who were retained in a kindergarten until they had attained a mental age of six years before they were permitted to attempt first grade work. Of the 25, 16 have made normal progress in school during the five years reported. Since it is

felt that even some of these sixteen are doomed to failure at higher levels, it is suggested that work adapted to the present and future needs of these slow or dull children should be provided by the schools. It is highly important to give them the vocational training that will help to make them self-supporting after they leave school.—*H. L. Koch* (Chicago).

1824. **Lo, T. K.** [An introduction to education.] Shanghai: World Book Co., 1933. Pp. 375. \$1.75 mex.—This book discusses (1) aim of education, (2) the pupil and his needs, (3) the learning process, (4) the teaching method, (5) classification of pupils, (6) curriculum and subject-matter, (7) discipline, (8) guidance of extra-curricular activities, (9) prediction and measurement of educational products, (10) school system, (11) higher, secondary, and elementary education, (12) social education, (13) educational administration and finance, (14) the teaching profession, and (15) research in education. Questions for discussion at the end of each chapter.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1825. **Meng, H. C.** [An introduction to education.] Shanghai: Commercial Press, 1933. Pp. 378. \$.80 mex.—This book covers the following major topics: (1) meaning and aim of education, (2) different kinds of educational institutions, (3) school system, (4) educational administration, (5) organization of the elementary schools, (6) curriculum, (7) teaching, and (8) profession of the teacher. There are supplementary notes at the end of each chapter.—*C.-F. Wu* (Nat. Res. Instit. Psychol., Shanghai).

1826. **Peller-Roubiczek, L. E.** *Gruppenerziehung des Kleinkindes vom Standpunkte der Montessori-Pädagogik und der Psychoanalyse.* (Education of the small child from the standpoint of the Montessori method and psychoanalysis.) *Zsch. f. psychoanal. Päd.*, 1933, 7, 93-103.—While Montessori has never formulated the basic principles of her method in psychoanalytic terms, practical application of them shows them to conform with the teachings of psychoanalysis. The aim of education from the point of view of the Montessori method, as well as that of psychoanalysis, is to bring the child into active contact with reality. It appreciates that the small child has need to give expression to its instinctual drives and find release for its bodily tensions. But for the child's motor activity to have educational value, this activity must be of such nature as will enable the child to obtain satisfactory answers to the problems with which objective reality is continually plying it. Play must not be looked upon as an expression of the child's greater fantasy life, but on the contrary, as a mode of seeking active contact with reality. The general task of education is to organize the experiences of the child in such a way as will make the necessary process of restraining primitive instinctual drives (*Trieb einschränkung*) part of the process of the child's inner development, i.e., development of its ego.—*D. Wechsler* (New York City).

1827. **Pinsent, A.** *Pre-college teaching experience and other factors in the teaching success of university students.* II. *Brit. J. Educ. Psychol.*, 1933, 3,

201-221.—Women's academic records are adversely affected by the fact of previous practical teaching experience, and in proportion to the amount of that experience. For men a period of 12 to 18 months produced no serious adverse effect. Students with previous teaching experience are somewhat superior in test-measured intelligence to student teachers. A low positive correlation is found between previous teaching experience and standing in examinations on educational theory. Ratings on teaching success, academic record, intelligence, and average theory scores show higher intercorrelations for women than for men. Given a minimum of intelligence and academic ability, success in teaching is most strongly determined by qualities of personality, character, and temperament for which as yet there are no very adequate tests.—*K. M. Cowdery* (Stanford).

1828. **Ransom, G.** *Remedial methods in English composition.* *English J.*, 1933, 22, 749-754.—The writer attempted to develop diagnostic and remedial techniques for group work instead of keeping these techniques for individual work. Two experiments were conducted. Analysis of written work showed that "most errors are a matter of habit and therefore can be eradicated by drill." Drill material was made by the teacher in order to correct the more common errors, which comprised about 80% of the total errors. Pupils kept records of their improvement. In the first experiment the experimental group improved 66.6% while the control group improved only 35%. In the second study the improvements were 60.1% and 33.6% respectively. The time required of the teacher for making the analysis, constructing the exercises and recording errors was four hours. The class spent six hours and twenty minutes on the project.—*S. M. Stoke* (Mount Holyoke).

1829. **Sandon, F.** *Progress through a secondary school as measured by school marks.* *Brit. J. Educ. Psychol.*, 1933, 3, 269-290.—In a school of approximately 330 pupils average grades compared term with succeeding term show a correlation of .80. For a group of 43, term averages with averages three years later (5 categories) show 16 remaining in the same category, 14 down 1, 7 up 1, 4 down 2, and 2 up 2, or an average change of one-fourth grade each. The longer pupils are in school the wider become their differences in mark-earning ability, an effect especially noticeable for those who enter young. Girls differ more among themselves than do boys, and the differences increase with length of school life. Girls are more consistent workers than boys. The correlation between marks of siblings was .866. The considerable range of educational quotients in any form is not accurately predicted by the entrance examination or by the Spearman intelligence test.—*K. M. Cowdery* (Stanford).

1830. **Sun, M. H.** [Kindergarten education.] Shanghai: Ta Hwa Book Co., 1933. Pp. 214. \$.60 mex.—This book covers the following chapters: (1) life and work of F. Froebel and M. Montessori; (2) kindergarten teachers; (3) kindergarten pupils; (4) building and equipment of the kindergarten;

(5) children's life in the kindergarten; (6) health of the kindergarten pupils; (7) art subjects in the kindergarten, such as music, drawing, and dramatic performances; (8) natural sciences in the kindergarten; (9) the production of the kindergarten children with consumption as its aim; (10) their toys; (11) their stories and tales; (12) their plays; and (13) the future of kindergarten education. Questions for exercise at the end of each chapter.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1831. T'ang, H. C. [Educational testing.] Shanghai: Ta Hwa Book Co., 1933. Pp. 176. \$.60 mex.—This book covers 5 parts consisting of 14 chapters. Part I as a general introduction deals with the meaning, function, history, and classification of mental and educational tests. Part II deals with intelligence tests, both for group and individual uses. Part III deals with educational tests for school subjects, such as Chinese language, arithmetic, social and natural sciences, common sense, drawing and music, etc. Part IV deals with the method and procedure of administering educational tests. Part V deals with the method of test construction. Chinese testing materials are profusely used. There are some questions for review and discussion at the end of each chapter.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1832. T'sao, H. C. [Elementary-school administration.] Shanghai: Ta Hwa Book Co., 1933. Pp. 253. \$.70 mex.—This book discusses the following major topics: (1) the administrative staff of the elementary school—the principal, teachers, and business managers; (2) school building and equipment; (3) three basic methods for improvement of the efficiency of elementary-school administration; (4) teaching and administrative problems; (5) the problem of school discipline; (6) some important problems of the business affairs; and (7) the extension work of the elementary school. The appendix gives elementary school law, regulations for elementary schools, and criteria of civic training in the elementary schools.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1833. Tu, T. C. [Elementary-school administration.] Shanghai: Commercial Press, 1933. Pp. 289. \$1.20 mex.—This book aims to make readers (1) know the relationship between elementary-school administration and educational principles, (2) become familiar with the details of elementary-school administration and its meaning, and (3) acquire a habit of treating elementary-school administration with scientific method, creative spirit, and economy. It covers 14 chapters and discusses the various aspects of elementary-school administration, with emphasis on the study of practical problems.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1834. Wang, S. I. [The principal and his elementary school.] Shanghai: Commercial Press, 1933. Pp. 308. \$1.20 mex.—Basing upon both theories and personal experience, the author discusses in detail (1) personality and duties of the principal and teachers, (2) methods of employing a teacher, (3) school finance, (4) school building and equipment,

and (5) organization and administration of the elementary schools.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1835. West, P. A study of ability grouping in the elementary school. *Teach. Coll. Contrib. Educ.*, 1933, No. 588. Pp. v + 70.—A statistical study of effects of ability grouping on the variability of scores on Stanford Achievement Tests. 4,743 pupils of grades III to VII from five cities were used as subjects; 29 classes had three ability groups, 20 classes had two. The variability (10-90 percentile range) in grades with three ability groups is about 83% as great as in unselected groups; in grades with two groups, 93%. When a multiple-track plan of promotion prevails, the variabilities are 74% for the three groups per grade, and 84% in the two. Ability grouping eliminates the need of adjustment in separate subjects for 7% of the class enrollment when three groups per grade are used (4% for two groups). The multiple-track plan increases this to 13% (7% for two groups). The bibliography lists 38 titles.—J. M. Stalnaker (Chicago).

1836. Wu, N. H. Two basic works for reconstructing the standardized tests. *J. Testing* (Chinese), 1933, 3, 167-170.—According to the author, the two basic or rather prerequisite works for reconstructing the standardized tests are (1) analysis of phrases and (2) analysis of the unit of subject-matter. Some work has been done on the analysis of phrases, but the scope of material collection is somewhat too limited. Single words need not be specially analyzed, but phrases should first be amply analyzed according to the "principle of psychological unit." So far, no work has been done upon the analysis of the unit of subject-matter. The author suggests that the relative values of the units of subject-matter may be ascertained by the objective quantity or frequency of their occurrence. With these relative values of the units of subject-matter in hand, one may objectively determine the weight and selection of the subject-matter for use.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

1837. Wu, Y. Y., & Wu, T. C. [A study of the elementary-school subject-matter.] Shanghai: Commercial Press, 1933. Pp. 384. \$1.20 mex.—This book discusses in detail (1) the nature of the elementary-school subject-matter, (2) its content, (3) selection, (4) organization, (5) classification, (6) arrangement, and (7) principles and methods of using subject-matter. Many practical examples are given. Problems of the use of textbooks for the various school subjects and the methods and tendencies of compiling elementary-school subject-matter are also discussed.—C.-F. Wu (Nat. Res. Instit. Psychol., Shanghai).

[See also abstracts 1693, 1736, 1785, 1793, 1859, 1878.]

BIOMETRY AND STATISTICS

1838. Cardenal, C. Una aplicacio de l'estadística grafica. (An application of graphic statistics.) *Rev. de psicol. i ped.*, 1933, 1, 298-304.—Cardenal's purpose is to show that in some instances the graphic method

gives unsuspected results which could be attained only indirectly by figures alone. As an illustration, he cites his use of Zyve's test (for selection of engineers) on 39 students at the Barcelona School of Engineering. Due to extraneous circumstances, the correlation indices were unsatisfactory. The graphic method, however, revealed the real value of the test as an indicator not of scholastic but of scientific aptitudes. The results show that of two good students, similar in aptitudes, the one who answers more rapidly and brilliantly will get the better marks in examinations. Of two poor students, on the contrary, the one who reflects longer and is consequently the slower, has the better prospects. Among students of average ability, these phenomena show no fixed rule. The data are presented in diagrammatic and chart form.—*M. E. Morse* (Catonsville, Md.)

1839. Darmois, G. *La recherche des régularités statistiques et leur interprétation.* (The study of statistical regularities and their interpretation.) *Biotypol.*, 1933, 1, 1-11.—The author stresses the usefulness of the cooperation of the biologist and the mathematician.—*M. H. Piéron* (Sorbonne).

1840. Deming, W. E. *De Moivre's "Miscellanea Analytica," and the origin of the normal curve.* *Nature*, 1933, 132, 713.—*E. H. Kemp* (Clark).

1841. Husson, R. *Quelques remarques sur l'application des méthodes statistiques en biotypologie.* (Some remarks on the application of statistical methods in biotypology.) *Biotypol.*, 1933, 1, 11-27.—The author condemns the mental attitude which hopes to replace strict experimental work with some mysterious virtue of statistics.—*M. H. Piéron* (Sorbonne).

1842. Nagel, E. *A frequency theory of probability.* *J. Phil.*, 1933, 30, 533-554.—A psychological theory of probability, which is supposed to be based on the measure of our ignorance of determining factors, actually bases its calculations on certain knowledge of the logical and mathematical relations involved (e.g. in dice throwing). A statistical theory, which identifies probability with the relative frequency with which events actually do occur, overlooks the fact that even single occurrences have a degree of probability (e.g. that Napoleon was an historical figure). A sound theory having regard to the applications to which it will be put must recognize both the logical or mathematical and the factual or statistical aspects. A judgment regarding probability is based on some "leading principle," and this principle is trustworthy in proportion to the relative frequency with which, when combined with true premises, it leads to true conclusions. The precise definition, which involves considerable technical refinement, is given. We may call this the "truth-frequency" theory of probability. Its superiority to the theories of Venn and others is demonstrated.—*E. T. Mitchell* (Beloit).

1843. Piaggio, H. T. H. *Applications of statistical methods.* *Nature*, 1933, 132, 647.—The report of a joint discussion of sections A and J of the British Association at Leicester on September 12 on "The Validity and Value of Methods of Correlation." The

first group of speakers, Dawson, Wilks, Irwin, and Fisher, dealt with statistical methods from a general point of view, with applications to a wide field. The second group, Spearman, Wishart, Brown, and Piaggio, restricted themselves to strictly psychological applications and in particular to Spearman's two-factor theory.—*E. H. Kemp* (Clark).

[See also abstracts 1441, 1752, 1809.]

MENTAL TESTS

1844. Atwell, C. R., & Wells, F. L. *Army Alpha revised—short form.* *Person. J.*, 1933, 12, 160-165.—A report of the development of a short form of the revision of Army Alpha. This short form, which includes subtests 2, 4, 7, and 8, compares with the total original form substantially as well as does the total revision.—*P. Seckler* (Radcliffe).

1845. Bayley, N. *The California first-year mental scale.* *Univ. Calif. Syllabus Ser.*, 1933, No. 243. Pp. 24. \$0.50.—In this test schedule items have been selected and adapted from numerous sources. These sources are named and directions for giving and scoring the tests may be found in this pamphlet. The norms thus far available for this schedule are based on a group of from 46 to 61 infants, who were tested at each month from 1 through 15 months, and tested also at 18 and 21 months. Reliabilities of the tests at each age, obtained by computing the coefficient of correlation between halves of the test, which were made as nearly as possible equal in the nature and difficulty of the items, and then applying the Spearman-Brown correction, are given in a table. The reliability in the first three months averages .62; beginning with month 4 the reliability coefficients attain a fair degree of consistency; for months 4 to 18 the average is .86, with a range from .75 to .95.—*E. H. Kemp* (Clark).

1846. Gillingham, A. *Medindo a intelligencia das creancas.* (Measuring the intelligence of children.) *Pan-American Union, Ser. Educ.*, 1933, No. 43. Pp. 9.—Intelligence tests afford a basis for comparison, but caution must be used in interpreting them. Many factors influence the scores and there are other sorts of performance of value equal to those ordinarily tested.—*C. M. Louttit* (Indiana).

1847. Kahlert, J. *Erfahrungen mit der Intelligenzprüfung nach Binet-Bobertag.* (Experiences with the Binet-Bobertag tests of intelligence.) *Zsch. f. Kinderforsch.*, 1932, 40, 526-541.—65 opportunity school (*Hilfsschul*) children 7-14 years of age were tested by the Binet-Bobertag test and 95 elementary school children by Norden's revision. In cases of mental retardation a pronounced spread of failure over the year-group tests preceding the chronological age is noted.—*K. C. Pratt* (Michigan Central State Teachers College).

1848. Monnin, J. *Recherches sur l'intelligence. Données sur la parenté de certaines formes d'intelligence.* (Researches on intelligence. Data on the relationship of certain forms of intelligence.) *Bull. Inst. nat. d'orient. prof.*, 1933, 5, 1-8.—Experiments

were made with a view to determining by statistical methods the different types of intelligence: numerical, verbal, logical and general forms and others connected with the predominant mental operation, the functions of comprehension, criticism, and invention. The tests used belong to a single type concerning the law of a series or of a group, and it is the variable position of the problem which determines the arousal of mental activity of a different order.—*M. H. Piéron* (Sorbonne).

1849. Piéron, H. (Mme.) *Essais en vue de l'établissement d'une fiche d'aptitude technique*. (Experiments to establish a test for technical aptitude.) *Bull. Inst. nat. d'orient. prof.*, 1933, 5, 30-37.—A complete study and standardization of the lozenge test of Thurstone and Jones. The test concerns spatial representation and has been given to 600 boys and girls 12-14 years of age and to 450 pupils in the professional schools of Paris.—*M. H. Piéron* (Sorbonne).

1850. Simon, T. *Quelques épreuves pouvant prêter à l'observation des enfants depuis la maternelle jusqu'à la fin de la scolarité et au-delà*. (Some tests which may be applied in the observation of children from kindergarten to the end of schooling and beyond.) *Bull. Soc. Binet*, 1933, 33, No. 11, 290-291; No. 12, 117-131.—The following seven tests are described: (1) The longer of two threads; the comparison of threads over a meter long requires a mental age of 6-7. (2) Exercise in stereognosia; the recognition by touch of 8 small objects which may be held in the hand, and 3 large objects. (3) Sound localization. (4) Dimensions of an envelope. (5) The temperature of a thermometer. (6) Telling time. (7) Test of connections in reading.—*M. H. Piéron* (Sorbonne).

1851. Wishart, J. *The two-factor theory of intelligence*. *Nature*, 1933, 132, 677.—A reply to the objection to Spearman's theory that *g* is not necessarily invariant for linear transformations of the test scores. Since overlapping tests are expressly ruled out by the psychologist, he need not concern himself with the mathematical consequences of linear transformation.—*E. H. Kemp* (Clark).

[See also abstracts 1489, 1736, 1774, 1836.]

CHILDHOOD AND ADOLESCENCE

1852. Benon, R. *Les anomalies psychiques et nerveuses de l'adolescence*. (The psychic and nervous anomalies of adolescence.) *Rev. scient.*, 1933, 71, 464-466.—Among a large variety of abnormal adolescent subjects the author distinguishes three types: those in whom intellectual disorders predominate; those in whom emotional disorders are predominant; and those who reveal a disturbance of sthenic function (nervous force). In the first group one finds the dysphrenics (mental debility), the dysprosexiacs, with good but unstable attention, and those with extravagant imaginations. In the second category are the unstable dysthymics (fugues), the weak dysthymics (choleric or phlegmatic), the timid dysthymics, the repressed, the expansive, and the

perverse. In the third category are the asthenics, the apathetics, and the dystheno-hyperthymics.—*M. H. Piéron* (Sorbonne).

1853. Brackett, C. W. *Laughing and crying of preschool children*. *J. Exper. Educ.*, 1933, 2, 119-126.—By means of an objective and reliable technique the author gathered data on the laughing and crying behavior of 29 children who attended the nursery schools of the Child Development Institute at Columbia University. These data were then analyzed from the viewpoint of studying the social and emotional behavior of preschool children. Laughing was found to be highly social, since children laughed more frequently when associated with other children or adults. Those children who ranked high in laughing seemed to prefer other members of the group who exhibited the same behavior. The majority of the children showed a tendency to confine a large proportion of their laughter to a few particular children. Children who ranked high in laughter during the play situations also tended to be consistent in this mode of expression during routine situations, but to a lesser degree. Crying was also predominantly social, although to a less degree than laughing. Children who cried with great frequency were not associated to any marked degree with the crying of others. The assumption that children cry more frequently when their activity is restricted was not substantiated by the findings of this study. As age increased, laughing increased and crying decreased.—*H. W. Karn* (Clark).

1854. Brüel, O. *Film als psycho-traumatisches Kindheitserlebnis (Psychotherapie)*. (The cinema as psycho-traumatic childhood experience; psychotherapy.) *Acta psychiat. et neur.*, 1933, 8, 445-454.—The author gives in detail the case history of a 15-year-old physically and mentally healthy girl, who suddenly developed a fear complex, the origin of which, it is claimed, could be traced back definitely to a particular scene in the film *The Hunchback of Notre Dame*, and which, when so traced, disappeared for good. The author calls attention to the many possibilities for mental disturbances originating from children's experiences with films and to the probability that the origin of such psychoses as are found in later childhood (as has been emphasized before) is in earlier childhood. He coins the term "psychotraumatic neurosis."—*M. L. Reymert* (Mooseheart Laboratory for Child Research).

1855. Bugnion, E. *L'éclosion de l'intelligence chez l'enfant avec quelques considérations sur la fonction du cerveau chez l'homme adulte*. (The dawning of intelligence in the child, with some observations on the function of the brain in the human adult.) Nice: Assoc. des naturalistes de Nice et des Alpes Maritimes, 1932. Pp. 35. (Also suppl. of *Riviera Scientifique*.)—The doctrine presented is a modified doctrine of monism somewhat spiritualized.—*M. H. Piéron* (Sorbonne).

1856. Burns, C. L. C. *Child guidance on the continent*. *Brit. J. Educ. Psychol.*, 1933, 3, 251-268.—Reports observations on the progress of child guidance and mental hygiene work in Italy, Switzer-

land, Vienna, Germany, Budapest, Holland, and Belgium. National and local variations are indicated as to the extent to which the approach to problems of guidance is psychological or medical. Note is made of considerable progress in mental hygiene in all of the countries.—K. M. Cowdery (Stanford).

1857. Bykowski, L. J. *Figle i psoty mlodziezy szkolnej*. (Tricks and practical jokes among high school students.) *Kwart. Psychol.*, 1933, 4, 41-191.—Tricks and practical jokes among high school students have been collected, analyzed and discussed from the following points of view: classification, motivating factors, race, sex and age differences, behavior patterns of initiators, victims and spectators, and their pedagogical value. A good many samples, including verbal material and sketches, are given in the text.—T. M. Abel (Sarah Lawrence).

1858. Conrad, H. S. *The California behavior inventory for nursery school children*. *Univ. Calif. Syllabus Series*, 1933, No. 244. Pp. 74. \$0.75.—The California behavior inventory for nursery school children is presented, together with directions for its use. Its main service, according to the authors, should consist in stimulating the closer observation of children, and facilitating the compilation of continuous records of children's behavior. Statistical analysis of approximately 25,000 ratings by three nursery school teachers indicates that some ratings are almost worthless, whereas others are probably quite useful. It is shown that the reliability of ratings and the agreement between judges vary significantly with (1) the trait being judged, (2) the child being judged, (3) the estimated significance of the particular trait for the child in question, and (4) the confidence with which the judge rates the particular trait for the child in question. Ratings made with high confidence are more reliable and valid than those made with low or average confidence. Traits of significance in the personality of the child being judged are rated much more satisfactorily than traits of less significance.—E. H. Kemp (Clark).

1859. Eakright, J. B., & Young, B. M. *Adventuring with toys; activities of a fourth grade*. New York: Teachers Coll., Columbia Univ., 1933. Pp. 253. \$2.00.—R. R. Willoughby (Clark).

1860. Eliot, M. M. *The effect of tropical sunlight on the development of bones of children in Puerto Rico*. *U. S. Child. Bur. Pub.*, 1933, No. 217. Pp. 122.—This monograph shows a very small incidence of rickets in children in Puerto Rico. On pages 28 to 31 are given tables showing the age of holding head up, sitting, standing, and walking alone for some 600 children examined with comparison of children studied in New Haven.—C. M. Louttit (Indiana).

1861. Fassbender, F. *Über einen Fall von Praecositas somo-psycho-genitalis bei einem 7½ Jahre alten Mädchen*. (A case of praecositas somo-psycho-genitalis in a 7½-year-old girl.) *Zsch. f. Kinderhk.*, 1933, 54, 642-656.—Premature development of genitalia and attendant psychic phenomena are diagnosed as resulting from a tumor of the pineal body.—K. C. Pratt (Michigan Central State Teachers College).

1862. Frank, H. *Leseschwäche bei einem 10 jährigen Knaben und ihre Behebung*. (Reading deficiency in a 10-year-old boy and its correction.) *Zsch. f. Kinderforsch.*, 1932, 40, 517-525.—Difficulty in reading, in children of normal intelligence, arises from a lack of development of perceptual function. Improvement in the case studied was effected by Decroly's method.—K. C. Pratt (Michigan Central State Teachers College).

1863. Frankenheim, H. *Die Entwicklung des sittlichen Bewusstseins beim Kinde*. (The development of moral consciousness in the child.) Freiburg Br.: Herder, 1933. Pp. x + 191. 4 RM.—The development of moral consciousness up to the time of puberty is the subject of this book. In this development the writer distinguishes five genetic phases. The moral growth of the child shows a development from outward to inward. The purpose of the book is not only to study the moral development of the child, but also to help the educator to direct and support it. For purposes of illustration and clarification a wide range of empirical material is utilized: the writer's own observations, parents' diaries, experiences of classical pedagogues, biographies, poetic creations, and experimental studies.—H. Frankenheim (Mehlen a/Rh.).

1864. Friesenhahn, H. *Untersuchungen über die Appetitsrichtungen und den Speiseabscheu bei Schulkindern*. (Investigations upon appetite trends and food aversions in school children.) *Zsch. f. Kinderforsch.*, 1932, 40, 1-54.—Sex and age differences in the appetite trends of 607 children (10- and 14-year-olds) were investigated, the relation to body types noted, and the basis of food aversions studied.—K. C. Pratt (Michigan Central State Teachers College).

1865. Halverson, H. M. *The acquisition of skill in infancy*. *J. Genet. Psychol.*, 1933, 43, 3-48.—Detailed analyses with tables and graphs are presented of the movements of individual infants at successive ages between 12 and 60 weeks, in the activity of reaching toward a pellet placed on a table top; special attention being given to lateral digressions, distance to pellet at completion of the movement, distance from the nearest point at any stage, time consumed, and amount of elbow extension. Lateral movements (errors) are found to increase to the 24th week (due in part to increase in general arm activity), then to decrease progressively (due more definitely to the learning function). Time is in no way a measure of speed or accuracy. The infant mind must begin this learning without any repertoire of movements—in contrast with child and adult learning; the change is one from reflexive sensory-motor to voluntary, and finally to automatic movements, which are then found well patterned. The order of development is: shoulder, elbow, fingers, trunk, and wrist.—J. F. Dashiell (North Carolina).

1866. Hildreth, G. *Adolescent interests and abilities*. *J. Genet. Psychol.*, 1933, 43, 65-93.—By means of an interest questionnaire and mental alertness tests ninth- and twelfth-grade children in a private school and in a public school were compared. Results

indicate a distinct superiority in mental maturity of the private school group, the ninth-grade pupils there exceeding the median score of the twelfth-grade public school children. The opportunity-vs.-native-ability question aside, this type of critically controlled questionnaire should have value for the planning of academic curricula or improving of recreational facilities.—*J. F. Dashiell* (North Carolina).

1867. Howden, R. A. *Child upbringing and the new psychology*. New York: Oxford, 1933. Pp. viii + 105. \$1.00.—The author, having been the subject of psychotherapeutic treatment, wishes to help dispel the prejudice existing against it in the minds of many, and to explain how application of principles of modern psychology to children's early training may prevent nervous and mental illness and enable the adult to make satisfactory adjustments to society, to work, and to love. Far-reaching effects are caused by the child's "will to power," feeling of inferiority, or unconscious conflicts. Punishment cannot be dispensed with, but in the exercise of authority it should be made plain that "restrictions imposed upon volition do not apply only to children." Sex instruction is particularly necessary for boys about to enter boarding school.—*M. P. Montgomery* (Faribault, Minn.).

1868. Jenkins, M. *Modern trends in the psychology of maladjusted school children*. *J. Genet. Psychol.*, 1933, 43, 94-122.—An attempt is made to analyze the present status and trends of the psychology of problem behavior from three viewpoints: (1) Methods of acquiring data include experimental and non-experimental, with emphasis upon the former until very recently. (2) Causal and genetic factors investigated include native intelligence, emotional conditioning, negativism, nervous habits, deceit, deviations from the norm, place in the family, etc. (3) Diagnosis by different sorts of psychometric and other tests, and treatment by change of environment and by change of motivation, are also listed.—*J. F. Dashiell* (North Carolina).

1869. Jersild, A. T., & Holmes, F. B. *A study of children's fears*. *J. Exper. Educ.*, 1933, 2, 109-118.—A report of some preliminary results in a study of children's fears. Strange and unfamiliar events, objects, persons, and places were found to outnumber other situations as the apparent cause of overt signs of fear in the behavior of preschool children. Situations which also frequently gave rise to fear were noises and objects from which noises proceed; animals; pain and conditions previously associated with pain; and high places, falling and displacement. There was a tendency toward a decline in fear of concrete physical objects and events after the second year. This suggests that, through increased experience with his environment, the child becomes accustomed to many events and comes to regard as commonplace many situations for which he originally had no adequate response. On the other hand, as the child grows older he becomes conditioned to many stimuli which previously had no meaning to him and he becomes capable of entertaining fears of remote and improbable dangers.—*H. W. Karn* (Clark).

1870. Jones, H. E. *Relationships in physical and mental development*. *Rev. Educ. Res.*, 1933, 3, 150-162, 177-181.—The present review does not attempt to include studies of the relationship of mental to motor development, and touches only incidentally the important field of recent research on biochemical factors in behavior. In general, desirable physical characteristics are positively correlated with desirable mental characteristics, but the correlations are too low to be of value in prediction or as an aid in the practical problem of classification.—*E. H. Kemp* (Clark).

1871. Male, P. *La genèse des troubles du caractère chez l'enfant*. (The genesis of disorders of character in the child.) *Evolution psychiat.*, 2nd ser., 1932, No. 3, 39.—The author presents a species of diagram of the child's character disorders, going from the simple to the complex: (1) undifferentiated disorders, resting directly on an organic base; (2) more differentiated disorders which explain, for example, mythomania, and which are influenced by the environment; (3) fixed disorders where the separation of the child from its environment brings no further regression.—*M. H. Piéron* (Sorbonne).

1872. Mazzini, —. *Il lattante in rapporto ai suoni e all'arte musicale*. (The nursing in relation to sound and music.) *Pediat. prat.*, 1932, No. 1, 340-341.—The author treats the anatomical and functional development of the ear and of hearing in the infant in relation to hereditary and environmental factors and to the musical compositions written for the very young.—*R. Calabresi* (Rome).

1873. Muggia, A. *La gelosia nel bambino*. (Child jealousy.) *Clin. e igiene inf.*, 1932, No. 12, 569-572.—The author presents the prophylaxis and treatment of child jealousy.—*R. Calabresi* (Rome).

1874. Murray, H. A., Jr. *The effect of fear upon estimates of the maliciousness of other personalities*. *J. Soc. Psychol.*, 1933, 4, 310-329.—Five girls eleven years of age were asked to judge how "bad" or "good" were the people represented in 30 photographs taken from a current magazine. One set of judgments was taken following a control, pleasure-invoking situation, while a second set were secured after a fear-invoking situation, a game of "murder." It was found that the ratings for three of the subjects indicated a significant increase in the "badness" of the persons pictured following the fear situation. No significant change was found for the other two subjects. Other evidence showed that the three subjects whose ratings were influenced by the fear-invoking situation were those most genuinely upset by this situation. The writer discusses the results in terms of the theory of projection.—*E. B. Newman* (Harvard).

1875. Ojemann, R. H. *What money means to the child*. (Child Welfare Pamphlets No. 25.) *Bull. State Univ. Iowa, New Ser.*, 1933, No. 702. Pp. 10.—Six characteristics of good parental practices in helping children to learn the use of money are discussed: (1) The child receives, according to a well-defined plan, some money which it is his responsibility to manage. (2) The amount of money and the responsibility which the child assumes are increased

so that by the time he reaches high school he purchases all his own clothing and his school supplies. (3) The child contributes his share to the general routine duties of the household without pay. (4) The child has an opportunity to learn important facts about the family's financial arrangements. (5) The child is allowed to suffer the consequences of unwise spending. (6) The child is given an opportunity to learn saving.—*B. Wellman* (Iowa).

1876. **Peiper, A.** *Agone und Tod im frühen Säuglingsalter.* (Dissolution and death in early infancy.) *Dtsch. med. Woch.*, 1933, No. 1, 119-121.—The author reviews and discusses the significance of the order in which reflexes are extinguished in the dying suckling.—*K. C. Pratt* (Michigan Central State Teachers College).

1877. **Pichon, E.** *Névroses infantiles.* (Infantile neuroses.) *J. méd. fr.*, 1933, 22, 120-123.—The majority of infantile neuroses are badly described and are simple affective retardations. Mental anorexia is found from the earliest age. Even hysteria may appear at the age of four, and obsessional neuroses from six to eight. Schizophrenia, on the other hand, is very rare, although occasional cases are seen after twelve years of age.—*M. H. Piéron* (Sorbonne).

1878. **Plank-Spira, E.** *Affektive Förderung und Hemmung des Lernens.* (Affective facilitation and inhibition of learning.) *Zsch. f. psychoanal. Päd.*, 1933, 7, 122-128.—Several cases of special disabilities in reading, writing and arithmetic due to emotional factors, as well as a number showing unusual progress in children of otherwise not outstanding intellectual capacity are reported. Investigation of the cases (all children at the Vienna Montessori School) revealed earlier neurotic or compensatory reactions to family situations, the discovery of whose psychoanalytic mechanisms led both to the understanding and (in the case of the disabilities) to the removal of the difficulties. As part of the remedial procedure in such cases, the writer suggests three pedagogic principles: (1) The subject matter in which a child shows any special disability should not be forced upon him. (2) If he shows special interest in another branch, his interest in this branch should not be discouraged. (3) Children showing special abilities should not have their performances compared with those of less gifted children. The remedial work on some of the cases showed the importance of having children of more than a single age level in a school grade.—*D. Wechsler* (New York City).

1879. **Reynolds, M. M., & Mallay, H.** *The sleep of children in a twenty-four hour nursery school.* *Psychol. Bull.*, 1933, 30, 552.—Abstract.—*J. F. Dashiell* (North Carolina).

1880. **Roubinovitch, J.** *L'adolescence, aperçu physiologique et psychologique à l'usage des éducateurs.* (Adolescence, a physiological and psychological survey for the use of educators.) *Prophyl. ment.*, 1933, 8, No. 36, 5-17.—Adolescence is characterized by a supreme effort to achieve complete being. This complete definitive personality requires of the adolescent a much more intense and spontaneous life than that of adults and children. This biological

spontaneity is an essential characteristic which must be comprehended and respected.—*M. H. Piéron* (Sorbonne).

1881. **Schachter, M.** *Les cris des nourrissons et des petits enfants.* (The cries of nurslings and of little children.) *Bull. méd.*, 1932, 46, 637-642.—The author considers the crying of the infant to be but one element of a total pattern of motor activity. With Kretschmer he holds that mass behavior (*reaction en masse*) is comparable to the reactions in hysteria. The biological efficiency of the infant's cries in affecting the social environment is discussed.—*K. C. Pratt* (Michigan Central State Teachers College).

1882. **Scherke, H.** *Zur Frage der Schülercharakteristik.* (Contribution to the question of the characterization of pupils.) *Int. Zsch. f. Individ.-psychol.*, 1933, 11, 301-316.—Presentation and discussion of a personality blank for school children. Scherke feels that such a blank should present the data supplying not only an objective description of the child and his achievements and difficulties, but also as objectively as may be the possible reasons for them. The questionnaire, originally issued in Vienna in 1923, records in a clear and easily identified form the material covering (1) physical traits and health, (2) family situation and parental attitudes, (3) attitudes and achievements in schoolroom and on playground, (4) interests and hobbies, (5) other observations and points of interest. With the present inadequacy in the training of teachers for mental-hygiene work the filling in of such a blank has real educational value in directing their attention to the significant factors in adjustment. Scherke holds that even children as young as five years of age can be taught wherein their adjustment difficulties lie and how to surmount them.—*O. N. de Weerdt* (Beloit).

1883. **Schmaus, M.** *Bravheit und neurotische Hemmung.* (Exemplary behavior and neurotic inhibition.) *Zsch. f. psychoanal. Päd.*, 1933, 7, 129-139.—Case of a 4½-year-old boy who first attracted the attention of his kindergarten teacher because of his unusual reserve, shyness, and complete lack of spontaneous participation in the activities of his school group. He was extremely docile and obedient, and at home would sit in a corner playing hours at a time by himself. This child came from a very puritanical home where the father exacted strict conformity to his notions of propriety. This strictness, which was also reflected in the attitude of the mother, together with a severe castration anxiety (following probable strong prohibitions against onanistic activity), had seemingly served as a thoroughgoing suppressive force, and had caused the child to give up his normal active role not only in his psychosexual but also in his general behavior. Through cognizance of these factors the author, a psychoanalytically trained teacher, was able to take certain positive attitudes toward the child in the school, which apparently helped to free him from his generalized inhibitions. At the end of two years the child's symptoms were entirely gone. The author asks how much of the improvement may be ascribed to the influence of the kindergarten as such, and how lasting its effect

may be expected to be.—D. Wechsler (New York City).

1884. Skeels, H. M. The use of conditioning techniques in the study of form discrimination of young children. *J. Exper. Educ.*, 1933, 2, 127-137.—Two form discrimination boards involving the use of conditioning techniques were used in the measurement of form discrimination in young children. One board made use of geometrical forms and the other of forms of animate and inanimate objects. 41 children ranging in age from 15 months to 46 months were used as subjects. The results of the experiments were as follows: (1) Ability to discriminate the forms at all age levels was evidenced by performance on the boards. (2) Genetically the ability to discriminate form seemed to appear before the ability to see the relationship between two units of the same form. (3) Once a bond had been built up between a stimulus form and a reward, certain modifications of the problem unit could be made without breaking down this bond. (4) Association between form and reward appeared to be made up of both "positive stimulus with reward" bonds and "negative stimulus without reward" bonds. In the absence of the positive stimulus form, children made their selections on a basis of negative forms.—H. W. Karn (Clark).

1885. Valentine, W. L., & Wagner, I. F. Relative motility of the arms of the newborn infant. *Psychol. Bull.*, 1933, 30, 582-583.—Abstract.—J. F. Dashiell (North Carolina).

1886. [Various.] *Compte-rendu du Congrès International de l'Enfance de Paris 1931.* (Report of the International Congress on Children, Paris, 1931.) Paris: 1933. Pp. 520.—The following lectures in psychology are reported in full: Decroly, "The beginning of imitation in the child"; Simon, "Abnormal children in the kindergarten"; Fl. Bertrand, "The child of two years"; G. Robin, "False distractions in children, epileptic or epileptoid obnubilation," and "Intellectual sluggishness in the child of school age"; H. Piéron, "The dawn of child intelligence"; Gonzales, "Results of the application of mental tests to Spanish children"; Piaget, "Intellectual egocentrism"; Soriano and Juarras, "Contribution to the knowledge of cases of child anomalies arising from mental motifs." Reports on open-air schools are also given.—M. H. Piéron (Sorbonne).

1887. Vygotski, L. S. *Vo-obrazhenie i tvorchestvo v shkolnom vozraste.* (Imagination and creative ability of the school.) Moscow: G. I. Z., 1930. Pp. 80.—The author observed the growth of imagination and chronological age in a group of school children for a period of four years. He arrived at the conclusion that the development of imagination is in direct ratio with chronological age. His investigations were particularly based on results obtained from studies of creative prose and poetry, technical construction, drawing, and dramatization. Vygotski also noted a correlation between imagination and autistic (fantasy) thinking. In opposition to Freud and Piaget, but in accord with Bleuler, the author considered autistic thinking not as a primitively original mental activity in the child, but as a function which is dependent on

realistic thinking and on the formation of concepts. The difference between realistic and autistic thinking, from Vygotski's point of view, is not the difference between the elements which compose these two types of thinking, but lies in the different structure or organization of identical elements, viz., emotional tendencies, abstract concepts, and imagery.—L. S. Maeth (New York City).

1888. Wallace, R. An interest inventory for use in the child guidance clinic. *J. Juv. Res.*, 1933, 17, 147-152.—The author describes a self-administering interest inventory, suitable for use with children of ages 10 to 16 and designed to reveal a subject's present interests in activities of a recreational, educational, and vocational sort.—H. L. Koch (Chicago).

1889. Weiss, L. A. Differential reactions of newborn infants to different degrees of light and sound intensity. *Psychol. Bull.*, 1933, 30, 582.—Abstract.—J. F. Dashiell (North Carolina).

1890. Wenger, M. A. Path-selection behavior of young children in body-mazes. *J. Exper. Educ.*, 1933, 2, 197-233.—65 young children ranging in chronological age from 1 year to 4 years, 9 months and in mental age from 11 months to 5 years, 10 months were used in 3 body-maze experiments involving the use of 3 maze patterns. The experiments were conducted in order to determine the practicability of planning maze studies with young children and to discover whether children rapidly set up path habits in mazes which offer more than 1 path to the exit. The results, which are presented in detail in the report, indicate that, above a necessary age minimum which varies according to the nature of the learning required, neither mental nor chronological age is a factor determining rapidity of learning in the types of maze situations employed. Individual differences in motivating conditions are suggested as being of greatest importance.—H. W. Karn (Clark).

1891. Woods, E. L. Behavior check lists. *Psychol. Bull.*, 1933, 30, 595.—Abstract.—J. F. Dashiell (North Carolina).

1892. Worcester, D. A., & Silkett, B. The distance from eye to work among school children engaged at various tasks. *Psychol. Bull.*, 1933, 30, 584.—Abstract.—J. F. Dashiell (North Carolina).

1893. Yefroikin, Z. [Fear in children.] *Unser Schul*, 1933, 3, No. 6, 6-10.—Popular account for the use of parent and teachers.—D. Shakow (Worcester State Hospital).

1894. Wyllie, W. G. Behavior problems and the backward child. *Lancet*, 1933, 224, 1247-1248.—Summary of a lecture delivered at a post-graduate course at the Hospital for Sick Children, London. Abnormal home conditions and physical illnesses are discussed as the primary factors bringing about abnormal behavior. Hereditary characteristics under favorable circumstances are not thought to interfere with the normal development of the child.—D. J. Ingle (Minnesota).

[See also abstracts 1457, 1472, 1489, 1495, 1519, 1538, 1558, 1667, 1668, 1707, 1720, 1727, 1735, 1736, 1745, 1782, 1791, 1792, 1807, 1819, 1823.]

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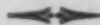
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